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THE TREATMENT OF RECENT CASES OF INSANITY IN PRIVATE AND IN ASYLUMS.

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HAPPY is the psychologist who is not concerned with his patients till he receives them within the walls of his asylum. Many of the physicians of our large public institutions are thus fortunate. They do not see or hear of those they are about to treat till they are admitted. They have not to advise removal, to write certificates, to plan means of conveyance. They receive them only in hospitals filled with the best contrivances for the care and cure of disease of every kind, and they can apply themselves without drawback or hindrance to the task.

Very different is the lot of a consultant summoned to see a patient who has become insane at home, or to chase him from place to place and examine him, perhaps in an assumed character, in order to advise a plan of treatment. Although anxiously consulted by the friends, his advice is as often opposed as adopted. Every conceivable objection is urged against his proposals and he is supposed to carry about with him some potent elixir which, without any restraint, will speedily disperse the cloud and bring back the sunlight of reason.

The object of this paper is not to discuss the treatment of the chronic or incurable insane but that of recent cases only, which are for the most part somewhat acute, not admitting of question as regards the insanity, but in which prognosis rather than diagnosis will play the most important part. We have to consider, when called to an acute case of mania, whether it is likely to be of brief or of lengthy duration, and where and how we can deal with it.

Recent insanity is a very curable disorder, as statistics from all quarters prove, and it behooves us to place the sufferer under such conditions that the cure may be effected as surely and speedily as possible. To the majority of cases a well ordered asylum affords the best means of treatment, for many it is a necessity, and removals ought to be urged in the strongest terms. But from time to time patients come before us whom, for various reasons, we wish to save from the stigma which, rightly or wrongly, is attached to one who has been an inmate of an asylum. This point is sure to be strongly brought up by the friends, and it is one not lightly to be put aside. Many fathers of families may be seriously damaged in position or prospects, or may even lose the post they hold. Some may be lads, or young girls at the outset of life, others young mothers in their first confinement. The reputation of having been in an asylum will never be lost by any one of these. The public attaches but little importance to a person being sent away ill to the country, or the seaside. If sent to an asylum it is quite another matter. In a practice of some thirty years I have seen many recover from a brief, though acute, attack of insanity, either at home or in a lodging or house suitable for treatment. My time does not allow me to enumerate even a fraction of such cases in anything like detail, but I wish to state very briefly some points which may help us to determine the prognosis and afford a hope that the malady will soon pass away. That this passing mania is recognized by psychologists is certain. Its name, *mania transitoria*, is adopted by many and well expresses the fleeting nature of the attack.

The chief point of prognostic value is the suddenness of the attack. It may come on, with scarcely any warning, in the course of a few hours, and in that brief time may develop symptoms of a very violent and acute character. There may or may not have been premonitory symptoms. This will depend very much on the cause—an exciting cause—lighting up the disorder in a brain prone to "instability" or "explosiveness." The illness comes on suddenly; we may hope that it will, if not as suddenly yet at any rate in a short time, pass away. I have known a young lady pass into chronic and incurable mania of the worst kind, whose malady commenced in the most sudden way and who was at once placed in an asylum. It was not, therefore, for want of skilled treatment that she did not recover.

Some guidance may be derived from the cause of the attack, if we are so fortunate as to be able to put our finger on it. If the cause is recent, not spread over a long period, but definite and rapidly producing its [illegible] is to be hoped that by removal of it, the effect may [illegible] a brief time subside.

Such a cause may be a sudden mental shock or fright; the loss of a relative, or a surgical operation. Here the suddenness of the event upsets the unstable equilibrium of the individual, and, although the cause may not be removable, as some are, yet the equilibrium is regained by the mind becoming by degrees able to contemplate the event, or being distracted therefrom by change of scene or surroundings. Another potent cause is religious excitement. Probably most of my hearers have seen women—aye, men too—attacked by hysterical mania after attending revival meetings and exciting religious services of all kinds. We may hope that in such persons the symptoms will quickly abate. I have seen several women, not young, but elderly, who have had sharp attacks of mania after a hot course of spiritualism, attendance at spiritualistic *séances* and the like. Two I have encountered lately. They were as violent cases of mania as one often meets with, but both got well in the course of two or three weeks without ever being removed from their own houses.

Another cause of sudden maniacal attacks, which I

have met with several times, is protracted fatigue, an unduly long walk or exposure to a hot sun for a long period.

This was in my opinion the cause in the case of an officer who had been attending the autumn manœuvres in Germany and had, for want of a horse, walked many miles in the sun on a hot day. Travelling back day and night to his command he thoroughly knocked himself up and developed an irritability which culminated in a violent and public quarrel with his superior officer, with outrageous conduct, exaltation of ideas, great personal conceit, and unmeasured and at times obscene talk. I was summoned from London, and asked to bring certificate papers for his removal to an asylum. By the time I got there he was in restraint, having been taken in charge by the authorities as a dangerous lunatic. On hearing a little about his previous history, I anticipated that the attack would not last long. So, as we had him in safe keeping, we carried him to the railroad, took him to his home in London, whence, in a fortnight, he went convalescent to the seaside.

A very long walk produced an attack of acute mania in a lady of very nervous temperament, who had had a similar attack on a previous occasion. This entirely subsided in a few days.

Very acute maniacal symptoms occasionally arise in the course or the decline of an acute disease, such as measles, scarlatina, erysipelas, pneumonia, and typhoid fever; and my friend Herman Webber has, in the forty-eighth volume of the *Medico-Chirurgical Transactions*, published the particulars of seven cases of this form, to which he has given the name of the delirium of collapse. He remarks that the delirium commences almost always on waking from sleep, and at a time when the disorder is declining, not when the temperature and the fever symptoms are most prominent. In his experience, the mania lasted for a short time—from eight to forty-eight hours—and all recovered. My own experience has not been quite so fortunate, and I have seen some who have not recovered quite so quickly, but still the majority do, and we may give a favorable prognosis. The occurrence of such mania, just as an illness is declining, is an alarming event, and the ordinary sick nurse is probably very unfit to cope with it, but removal from home should not be thought of until sufficient time has elapsed to show whether the mental symptoms will be brief, or prolonged.

And here I may mention those curious cases of mania which occur in connection with gout or rheumatism. Sudden maniacal symptoms may present themselves in a man, or a woman, and the case assume the appearance of the greatest gravity, and all this may as suddenly disappear on the supervention of an attack of acute rheumatism, or gout in some joint. It is always worth while in patients with such a history to try to develop an attack of gout by the application of mustard to the feet and the administration, rather than the withdrawal, of a liberal diet.

Brief and very violent attacks of mania may follow epileptic seizures. Here we shall have the history of the case to guide us in the majority of instances. But it sometimes happens that no one has seen the epileptic fit or known the patient's previous history. It lately happened to me to have a patient sent to my hospital, who for a few days was one of the most troublesome that I ever encountered. He then rapidly recovered, and his whole term of residence was only a fortnight. It was impossible to keep this man in his own home, and his means being small, no temporary abode with requisite attendants could be provided for him.

We are all familiar with the acute alcoholic delirium to which is given the name of delirium tremens. It is not uncommon and is easily recognized. It is a transitory mania, and generally terminates within a week in recovery or death. But besides these, we occasionally see symptoms of insanity produced by drink, delusions and hallucinations very like those of ordinary insanity, but which pass away quickly if the drinking has not been prolonged. Two cases have come before me lately, and one last year. One of the two was a young lady, between twenty and thirty, who suddenly showed alarming symptoms, which subsided after two good nights, produced by chloral and bromide. The second was an old lady, whose hallucinations of hearing were said to have been produced by chlorodyne; I suspected, however, that she mixed it with a good drop of brandy. The lady was last year so bad that I thought she would have to go to an asylum. She came to me from the country, and her relatives at first concealed the fact of her having drank, but she suddenly got well in about a fortnight, and the secret came out. We shall derive great aid in our prognosis if we are able to ascertain that the patient has had previously similar acute attacks, which have passed off in a short time.

These sudden violent accessions of mania are just what we should expect to find in persons of such an unstable nature that they are ready to explode at the least thing which opposes them. Thus we see so many who are driven into furious gusts of passion by mere trifles, and for a time are hardly responsible persons. I know several who habitually have accessions of mania. One, a gentleman of great intellectual ability but nervous to a degree, has had three within my knowledge. On one occasion he was speedily placed in the asylum, which converted a brief attack into one most prolonged. The last time I saw him he was not violent, but in a kind of cataleptic seizure, unable to speak or take food. I warned his medical attendant that it would pass away, and it did entirely, in forty-eight hours or less. The officer of whom I spoke had had something of the kind before, which prompted me to keep him at home and not send him to the asylum. Of course, after repeated attacks, recovery may not, probably will not, be so speedy as after the first or second, still we may reasonably expect it to occur without any removal, or other special treatment.

In two highly nervous individuals the attacks have been more melancholic than maniacal, being of the nature of intense panic, with delusions of fear—fear that every one about was conspiring to inflict some injury, or traduce and take away their character. Two cases have lately come under my notice and both terminated almost suddenly, but owing to different causes. Each tried to escape from his imaginary persecutor, the one by running away, the other by suicide. The former succeeded and got away to his friends on the continent. Feeling himself safe in the hands of his friends, his fears and delusions vanished, and he returned after a short time to his home and business. The other gentleman

took poison, but only succeeded in making himself horribly sick, which cured him. In consequence of the suicidal attempt, the authorities packed him off to the nearest asylum. He was well, however, before he started, and wrote me a letter telling me all about it. I saw him the next day and he seemed absolutely recovered and sane.

What is there in the physical condition of the patient to aid us in our prognosis and determine the brevity, or length of the attack? The temperature will not give us much assistance. Neither in transitory nor in prolonged mania do we find any great rise in temperature. The pulse will tell us rather more. It may be quick when great excitement, violence, singing, and shouting, are going on, and when the paroxysm is over, and all this noisy excitement occurs in paroxysms, it may fall very considerably, and the pulse be not much more rapid than normal. If it does not so fall, but on the contrary remains rapid, even when the patient is comparatively quiet, the chances are the mania will be a prolonged attack, and we shall have to treat it not for days but for weeks.

The tongue, too, will give us some help. In very violent attacks it often happens that this will remain moist and clean, presenting no abnormal appearance. On the other hand, if it becomes dry, more and more furred and brown with that coat which is so indicative, not of stomach derangement, as we so often hear, but of acute nervous disorders, then we can hardly hope that it will pass away in two or three days.

There is often a great deal in one of these maniacal attacks, which, for want of a better name, we may call hysterical. As a rule they are characterized by noise and violence, rather than by fixed delusions. They begin suddenly, or after a very short period, and delusions have not had time to take definite shape. Now, in the hysterical attacks, between the intervals of violence, there is often a good deal of consciousness and attention directed to what is going on. If these increase, we may hope for a speedy return of rationality. If they decrease, if incoherence and inability to converse increase, and if delusions are manifest, then the prognosis of speedy recovery will be unfavorable. This hysterical state and these hysterical symptoms will last some time, not varying very much and without any increase of the graver symptoms. Yet we know certainly that they will pass away, because there is so much reasoning power at one time, though with great excitement and violence at another. We may have reason to suspect that a good deal of the latter is put on and is to be met by moral control.

Treatment will often aid us in the prognosis of these cases. Sleeplessness is a main feature in many of them, and it not infrequently happens that, after a long sleep produced by a narcotic, the patient wakes recovered, or so nearly so that we are no longer anxious about him, precisely as we see men recover in delirium tremens. Now for the producing of sleep, what a number of medicines we have at hand! When I began to practise, there was nothing but opium and its compounds, and to administer opium, or morphia to a patient in this stage would almost certainly have the effect of not producing, but of preventing sleep. But now there are the bromides, urethan, paraldehyde, chloral hydrate, hyoscine, hyosciamine, and others with which you are acquainted. If a usual dose of one of these produces a refreshing sleep, and the sufferer awakes with his mental symptoms lessened, his mind clearer, and excitement diminished, our hope of a speedy termination may be strengthened accordingly.

But if the maniacal attack does not subside in a few days, or in a week, and it appears probable that it will be an affair not of days, but of weeks, or months, what are we to do? The friends may be altogether against us in our purpose to send the patient to an asylum, and will profess their willingness to consent to any other alternative. The question, we find, resolves itself chiefly into one of cost. There are many patients, uneasy, delirious, and excited, who are not homicidal, or suicidal, or dangerously violent. By good attendants they may be nursed through an attack of mania, if the friends will defray the expense, by the orders of the physician. In nine cases out of ten they must be removed from home. Home surroundings and the appearance of near relatives are prejudicial, so that a house, or rooms must be taken and made suitable for such a case. The windows must be made safe. Bedsteads and furniture must be removed. The bed must be made on the floor, and the services of several good attendants must be secured. To harness the patient to the bedstead by his ankles and wrists and to keep him thus day after day and week after week is not treatment, though, unfortunately, it is, even now, occasionally met with and acquiesced in by friends who disdain the services of a lunacy doctor, and put up with anything rather than listen to what they know would be the advice of such a specialist. And not only will it be necessary to have suitable rooms for the patient. There must be the means of giving him air and exercise, but not in the streets of a town, but in a garden, or country fields. All this involves considerable expense, but where the case is suitable and money no object, it is often worth while to try to effect a cure by this method, and so save the stigma of an asylum and the subsequent feelings of the individual. Of course, it often happens, that the friends, although at first professing that they will do anything rather than consent to an asylum, do in time get tired of the heavy expenditure and the trouble which the management of the attendants and servants give them. Being, too, often very nervous people and born with the same temperament they cannot stand the racket any longer, and to the asylum the patient goes. But he may get well without.

There are some patients, however, who are to be sent at once, whom it is useless to treat in a single house, and who will become more dangerous by such treatment. These are persons affected, not by uneasy and active mania of recent origin, but by delusions which have gradually deepened until they are dangerous to a degree to those about them. Such cannot be kept in one room with sick patients. They require considerable exercise, the vigilance of many attendants, and the authority of a superintending physician. They demand moral control and coercion. The discipline of an asylum and the loss of liberty act beneficially upon the disorder, and the example of others is frequently of the highest service. We see, also, many patients whose malady we recognize as chronic and incurable, being often of long standing. It is a pity to let these, or their friends be impoverished by the expense incidental to a

residence outside an asylum, when to the latter they must come at last, and to one less comfortable if all their money has gone.

There is, too, one large class of moral patients, and generally paralytics, whom it is very difficult to treat out of an asylum, except in rare cases where quiet imbecility sets in at once. The restless, exalted, and often angry excitement which characterizes the early stages demands a larger room and space than a private house affords; and the feeling of intense self-satisfaction and happiness prevents their feeling restrained or chafing at their surroundings.

Passing from the acutely excited and maniacal patients, I may consider for a moment the treatment of the depressed, or melancholic. The non-asylum treatment of such has probably been tried in most instances before a resort is had to specialists. They have been sent away from home; have had rest from work, and more or less medical treatment; but the gloom has deepened, and special advice is sought. Are we to send them to an asylum? Here the question of suicidal propensity will come in. Many I hear say that the asylum is the only place for a suicidal patient. But an asylum is not an absolute safeguard against suicide, as the reports of our Commissioners show. Nothing but the persistent vigilance of good attendants will prevent it; and vigilance may be applied both out of and in an asylum. There is more than one kind of suicidal patient. Some there are who will not make the attempt unless they have a tempting opportunity, and are left alone by those who should look after them. But others will try and injure themselves all day long, even in the presence of others will they try to gouge out their eyes, throw themselves out of bed and break their bones, and, in fact, damage themselves in every conceivable way. So, again, some will refuse food, but will eat on complusion, or will allow themselves to be fed with a spoon. Others require to be fed by force, either by nasal or œsophageal tube, entailing the efforts of several people. Clearly some of these can only be treated in an asylum, while the less acute may be kept in a suitable house and, by vigilant attendants and judicious companions, nursed back to health. The attack of this melancholy, however, is very different from the short and acute attacks of mania which I have spoken of before. It is the most tedious of all the curable forms of insanity. We have to carry out the treatment, not for days or weeks, but for months. Consequently expense becomes a serious question, and poor patients have to go to the asylum, because they cannot afford the cost of a house and attendants. It is useless to attempt to cure such at home. The sight of home and home-surroundings intensifies the gloomy ideas and urges the sufferer on to suicide. It is intense egotism, self-feeling, selfishness, or whatever we choose to call it, which distinguishes so many. They will tell us that there never was such a case before, that they never can get well, that we are altogether unable to comprehend their individual symptoms. One of these patients will completely upset his home, and we order him away; but placed in a house with attendants and companions, or in a doctor's house, he may still be able to make himself seen and fix everybody's attention, and his self-importance is fostered and not diminished by the move. Place this man in an asylum of, say one hundred patients, and make him the one-hundredth part of the unit instead of one important unit, and the effect is often wonderful. Possibly he has been refusing his food and has required to be fed with much coaxing and entreating. Seated in the midst of twenty others, he takes it because they do, and no one seems particularly to care whether he takes it or not. The best medicine for these people is what I term judicious neglect.

To cure a patient's insanity without having to send him to an asylum, is a matter of great satisfaction both to one's self and to the friends of the sufferer. It is akin to the feeling of the surgeon when he saves a limb after a severe accident, or heals a diseased joint without having recourse to amputation. But I am not one of those—and this I wish clearly to enunciate—who think that all or nearly all acute cases of insanity can be treated in private dwellings.

We hear from every one who is capable of forming an opinion that early treatment is necessary, and that if a case is not treated early it will in all probability become chronic and confirmed. With these I cordially agree, and when I have spoken of mania cases treated successfully out of an asylum, it is because I wish to point out that there are some such, and that in practice we not infrequently meet with them, recognizing them amidst many others for whom an asylum is the proper place and alone can afford the proper treatment. Many must go because they have no funds and no friends. Taken care of by the State, they must go to a public institution. If we do not send the case thither it must be because we think that we can treat it as well and as successfully outside, and if our method fails and it is plain that the patient is getting worse and not better, we ought to bring it to an end and have recourse to an asylum, by overcoming the reluctance of the friends who so constantly think, not of the patient but of themselves.

It will be obvious that the limit of time allowed here does not give more than the briefest outline of the subject, which, to treat in full, would demand a chapter far exceeding that which I am able to set before you. It is impossible to enter upon the treatment of such cases, but American physicians are perfectly conversant with this, and I need not enter upon it, even if time allowed.

There is another matter connected with it, namely, the law. How far are we justified in treating our patients outside an asylum without having recourse to lunacy laws and all the apparatus of medical certificates, and orders? I am glad to be spared all reference to this question. In this country, I believe, the laws differ in different States. I can say, however, what the law ought to do. It ought to enable us to treat a case for a certain time outside an asylum, without having recourse to certificates, just as we should treat any ordinary case of illness, as the delirium of fever, or delirium tremens. In Scotland there is this power; in England there is not, and I fear that there is not much hope that there will be. I hope that here such provision exists, and that, if it does not, it will at no distant date.

I have thought fit to bring this subject before you because it is often thrown at us that lunacy doctors wish to send every patient to an asylum and have no other method of treatment. As there are many who impera-

tively demand the care of an asylum, not only that they may be kept in safety, but for cure, so are there others whose recovery may be brought about without being so sent. It is our duty to discriminate so far as we can between them. Those who suffer from transitory mania are not the dangerous class who should be sent to an asylum as speedily as possible. The delay of a few days will often not materially interfere with the after-treatment if the asylum is eventually necessary, and in this period recovery will take place. I cannot hope to have assisted you much within the limit of this paper in the diagnosis of such cases; but, at any rate, I may claim to have directed your attention to them.

ORIGINAL ARTICLES.

ON DIABETES.[1]

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DIABETES has always been regarded as an incurable disease, and although it has elicited much study, there are still many points open for investigation. The nature of the affection may be stated in very precise terms. It is simply a faulty assimilation or a faulty disposal of certain elements of our food. If we look to the food of man, we find that the chief elements of it are nitrogenous matter, fatty matter, and carbohydrates; that is to say, the large group consisting of starch, cane sugar, grape sugar, dextrine, etc., behave in the system the one exactly the same as the other, so that it would be better to employ this general term.

In diabetes there is no difference in the behavior of the carbohydrates: starch behaves the same as cane sugar, the same as dextrine. It is this group of principles in connection with which there is a faulty disposal or a faulty assimilative action. The disease consists essentially of that. A healthy person, for example, takes one or another of the carbohydrates, and it is lost sight of in the system; we know nothing more with regard to it, and we assume that the processes of life are such as to lead to the transformation of this carbohydrate in such a manner that it shall be susceptible of utilization in the system. That is the case with the carbohydrates. That is the condition of health; but what is the condition of diabetes? In diabetes, one of these carbohydrates may be taken, and in proportion as the carbohydrate is taken, so is sugar eliminated in the urine. We may therefore say, and it is merely the expression of a fact, that in the diabetic there is a want of assimilative power, there is a want of the power to dispose of what carbohydrates may be taken into the system as food. Thus far, I think, we have to deal with facts.

In diabetes the sugar reaches the general circulation in a manner that it should not do. In a state of health analysis shows that only a trace of sugar exists in the contents of the general circulation—in the small proportion of 0.6, 0.7, 0.8 per thousand, so that when a carbohydrate is taken as food, it is stopped before it reaches the general circulation. Not so with diabetes. Here sugar exists to a large extent in the general circulation. In proportion to the severity of the case will be the quantity of sugar contained in the general circulation. The carbohydrate which is taken as food does not stop before reaching the general circulation, but in proportion as it is taken, so does sugar appear in the urine. The sugar appears in the urine in proportion as it exists in the blood, and, therefore, the urine may be said to be the index of the diabetes.

The amount of sugar in the urine stands in direct relation to the amount of sugar in the blood. You cannot possibly keep sugar in the circulation; it will not remain there, but it will make its appearance in the renal secretion. Now I have at present only given expression to facts that may be observed.

But why does sugar thus get into the general circulation in diabetes? That is the important point. I think it is generally admitted that the liver constitutes the assimilative organ for the carbohydrates. The liver it is that stops the sugar, or the carbohydrate in its passage to the general circulation. The sugar is so changed by the liver that it is not permitted to arrive in the general circulation. Sugar in the organism is transformed into glycogen, and leads on to the production of fat. Its office may be demonstrated in the lower animals. If you want to fatten an animal quickly, feed it on an abundance of sugar. This, I think, demonstrates the use of sugar in the production of fat. The liver, then, I think, is a steatogenic organ, transforming the sugar into glycogen, and afterward into fat.

It seems to me in health that this is what occurs; that the carbohydrate absorbed from the intestine is stopped by the liver, converted into glycogen and then into fat, instead of being passed through the organ and appearing in the general circulation. If, however, it passes through the organ, we have diabetes. But, what is at the bottom of this faulty process? It seems to be a wrong condition, apparently arising from a faulty condition of the venous blood. The liver is differently placed from other organs, in its large supply of venous blood and its proportionately small supply of arterial blood; and the blood which reaches it should be in a good venous condition. If it be not in a good venous condition, we have the chemistry of the liver immediately altered, and sugar appears in the urine.

This alteration of the portal blood may be produced in a number of ways, it may be produced by disease or by experiment; in the first place, by the injection of defibrinized arterial blood into the portal circulation. In a very short time after arterial blood from which the fibrin has been removed has been introduced into a vein of the portal system, we find sugar in the urine. The blood may be rendered saccharine by over-oxidizing the systemic blood. Experiments—not only my own, but those of others—have demonstrated this, that the carrying on of respiration in the lower animals more actively than normal, the heart's action continuing, will lead to the production of

[1] A communication to the Section of General Medicine, of the International Medical Congress. Stenographically reported for THE MEDICAL NEWS, and revised by the author.

saccharine urine. If oxygen exist in the portal blood to an extent to which it ought not to exist, you will have saccharine urine.

How does this apply to diabetes? If you get a vaso-motor paralysis of the arteries of the body you will have that condition. If, as may be witnessed, we have a vaso-motor paralysis of the vessels of one side of the head and neck, we find that the veins of the region become distended, not with venous blood, but with semi-arterial blood. As a result of such, the blood will arrive at the liver without being fully de-arterialized; in other words, in an imperfectly venous condition. If the arteries of the abdominal organs, of the chylopoietic viscera become enlarged so that the blood in them does not become perfectly de-arterialized, you will find the chemical action of the liver becoming changed so as to permit the carbohydrates to pass through it and get into the system, and so charge the general circulation with sugar. The worst forms of diabetes I have met with are those in which there is a dilated condition of the vessels of the mouth. For the production of diabetes, it is only necessary, I consider, for us to have a dilated condition of the vessels of the chylopoietic viscera. But the worst cases of the disease, as I have just said, are those in which this dilated condition of the vessels, due to vaso-motor paralysis, has extended from the chylopoietic viscera and visibly involved the mouth. In these cases we have the presence of an exceedingly red tongue.

Again, puncture of the floor of the fourth ventricle, that celebrated experiment of Bernard, leads to the presence of sugar in the urine. Now what did Bernard himself observe in connection with the animals thus experimented upon? A dilated condition of the vessels of the chylopoietic viscera.

One of the first points to attend to in a case of diabetes is to test for sugar. Sometimes discordant opinions are expressed with reference to cases; one physician, for instance, will say that the patient is suffering from diabetes, while another physician will say that he is not suffering from the disease. Sometimes that depends upon the test made, at other times it depends upon its being a mild case of the disease, which presents varying conditions under the influence of food. If the patient has partaken freely of carbohydrates, sugar exists in his urine, and, if examined then, it is to be detected. Then he goes to another physician after he has not partaken so largely of the carbohydrates, or perhaps after a fast, and there is no sugar present.

We want a test that will give us a decided and reliable indication. I believe that the most reliable test for sugar in the urine is the copper test. What is ordinarily used is known as Fehling's solution. But there is this objection to Fehling's solution, namely, that it is apt to get bad after being kept, because, if kept for a long time it will throw down a precipitate; and again, the stopper of the bottle, unless used often, is apt to become fixed, and when you want to use it you cannot get it out. Some time ago I came to the conclusion that it would be well if we could get the Fehling's reagents prepared ready for use in a solid form. I found, however, that when thus prepared the agents rapidly deliquesced and decomposed. Here, however, is a pellet which I have had prepared in which the difficulty has been overcome. It is composed of the copper sulphate, Rochelle salt, and caustic potash. It must be made in a certain way with the materials in an anhydrous state. The sulphate of copper is to be placed in the die first, then some Rochelle salt, next the potash, and finally some more Rochelle salt to complete the mass. If now we dissolve one of these pellets in a little water, we have first produced the greenish color of the copper, but, later, as the potash is reached, it becomes blue, as is characteristic of Fehling's solution. If these pellets are kept in well-stoppered bottles they will keep for any length of time. And there is this advantage about the pellet, that if it does become bad from the absorption of moisture, it becomes so bad that it cannot be used, and therefore there is no danger of its leading to error. It will, if exposed to the atmosphere, become altered, but it then turns black, so that the change is readily recognized, and it cannot be used. If I now add to this solution a little liquid containing sugar, and boil the mixture, the oxide of copper becomes reduced to the state of suboxide, just as in the ordinary testing with Fehling's solution. These pellets are now considerably used in England.

I do not think that a case of diabetes can be satisfactorily managed unless a quantitative analysis of the urine is made, and the amount of sugar contained in it is determined. I do not consider that a person can get along satisfactorily without knowing the amount of sugar that is being eliminated by the kidneys any more than he can get along in a case of thoracic disease without knowing, by the aid of the stethoscope, exactly the amount of disease existing there. In my own practice, I desire that two specimens be brought to me; one passed in the evening and the other upon rising in the morning. By an examination of this kind you can discover errors of diet in your patient that would otherwise escape you. You do not need to ask the patient at all what he has been eating; you can can tell him. Errors of diet can be detected at once. You can not only detect that the patient is not following your instructions, but you can tell at what meal the error has been committed. Under ordinary circumstances, if the person is passing sugar (of course, if he is not passing sugar you cannot tell anything about it) you may find in the night urine a considerable quantity of sugar, and in the morning urine none at all. The sugar in the night urine has been derived from the carbohydrates taken during the day. The morning urine has been derived from the blood during the night, and therefore in the interval of digestion, and thus may contain no sugar. The urine of food may be quite different from the urine of fasting.

I remember once a patient whom I had treated for some time, coming to me with a bottle of night urine containing an unexpectedly large amount of sugar. I could not account for this sudden increase of the amount of sugar in it. I got him to enumerate the articles of food he had taken the evening before. Among the articles enumerated

he named blanc mange, but he had frequently taken that before without injury. I told him to inquire, and that in all probability he would find that it had not been made in the usual manner; and upon doing so, he learned that it had been made with corn flour (corn-starch) instead of in the manner that had formerly been done, viz., with isinglass and cream. In another instance I was able to tell a patient that she had taken her breakfast in bed. I found in this case that the night urine contained no sugar, while the morning urine was loaded with it. She had arisen late, and the only way of accounting for these conditions observed was on the supposition that she had eaten before arising, and this I found was actually the case.

Now we want some means of easily and precisely determining the amount of sugar contained in the urine. This can be done as follows: As we know and have just seen, in testing in the ordinary manner with the copper solution, the suboxide of copper is precipitated. In the method that I shall show you, instead of this, the solution remains clear, and becomes colorless, and the sugar is estimated from the amount of liquid being examined, that is required to decolorize a given quantity of the solution. The solution is made with the sulphate of copper, Rochelle salt, caustic potash, and water of ammonia. Into a given quantity of this the liquid containing sugar is dropped. It is best in testing urine to dilute it with twenty or thirty parts of water in order to make the test more delicate. The diluted urine is placed in a graduated burette, from which it is dropped into the ammoniated copper solution after the latter has been heated to the boiling point, letting it flow drop by drop until the color has just entirely disappeared. The dropping of the liquid into the test solution is guided by means of a screw adjustment affixed to the tube, which can be set so as to permit the escape of forty, fifty, eighty, or one hundred drops per minute. The beauty of the test is that the exact terminal point of the reduction can with the greatest surety be determined, for there is no precipitate to obscure the view of the reduction. You observe now in the apparatus before me that as the saccharine liquid drops into the boiling test solution the color is gradually disappearing and the liquid remains perfectly clear.

Sometimes albumen is found in addition to sugar in the urine of the diabetic. Not infrequently you will find that when the patient first comes under your observation he has a considerable quantity of albumen in his urine, and that after he has been under treatment for the disease for a while the albumen disappears. This will permit me to bring to your notice a convenient test for albumen. This consists of citric acid and the ferrocyanide of sodium, the ferrocyanide of sodium being used because it makes a looser pellet than the ferrocyanide of potassium, and therefore more quickly dissolves. There is this advantage about it, that as a clinical test you require nothing more. If albumen is present, you are sure to get a precipitate; and if you get a precipitate, you are sure that albumen is present. It is also a test of an exceedingly delicate nature. It is a test that requires nothing to check and nothing to corroborate. You can carry it with you in your pocket like a pencil-case or pocket-knife. No matter whether I need it or not, I always have my albumen test in my pocket with me. I have here, as you see, a very compact tube containing all that is required. I will show you the method of using the test with this liquid, which contains albumen. The citric acid pellet must be used first. It very speedily dissolves. Sometimes citric acid will bring down a precipitate of uric acid, or it may be of oleo-resinous matter; but, as it is not the citric acid which is the test, we do not rely upon that. If the citric acid brings down a precipitate of uric acid, a dilution of the urine will redissolve it. On the addition now of the other pellet, consisting of ferrocyanide of sodium, you have a definite and reliable precipitate of albumen produced. This test has now been out several years, and, so far as is known up to the present time, nothing under the circumstances will occasion a precipitate with the pellet of ferrocyanide of sodium besides albumen, so that it is a test upon which you may rely alone.

I will speak now of considerations bearing more particularly upon the disease itself. There are different grades of intensity probably as marked in diabetes as in any disease we have to deal with. Let us start with a healthy person. Even a healthy person has not an unlimited power of assimilating the carbohydrates, but the first step toward disease is where the assimilative power is below the normal. This kind of person will not, under ordinary circumstances, pass sugar in his urine. If, however, he partake freely of preserves, or other articles of food containing large quantities of sugar, he will pass saccharine urine. Then you come to persons who, when partaking moderately of food containing carbohydrates, will pass sugar. They may take carbohydrates to a certain extent without showing evidence of abnormality, but as soon as the limit is passed, sugar will appear.

Age influences largely this complaint. Severe cases are in young subjects, mild cases are in old subjects, and the more advanced the age, the better the prognosis. I know of no disease in young subjects that is more grave. The ordinary length of life in young subjects afflicted with diabetes may be said to be about two years. In middle-aged or elderly persons the prospects, happily, are of a different nature. If they follow proper management they can keep the disease under. The unsatisfactory cases are in the young, the satisfactory cases in the elderly.

The age at which the disease is most common ranges between forty and sixty years. Preparatory to the meeting of the British Medical Association a few years ago, I went through my case book and tabulated 1360 cases, and I found that the cases occurring between forty and sixty years of age made up fifty-six per cent. of the whole.

Sometimes the disease commences in mild form, and may run along for several years before it is recognized. You may say, What authority have you for making such an assertion? How do you know that the disease has run for some time without having been recognized? There is this way of knowing it: saccharine urine leaves white spots on articles of

clothing, and in micturition the trousers are apt to get splashed. The "boots" at hotels are able to recognize diabetic guests. They find the spots on the legs of their trousers very difficult to brush out. I have had patients come to me who were able, when asked, to hunt up old trousers on which these spots were found, and could remember the annoyance occasioned by them for a long time before. Such are the grounds for being able to say that the disease may have existed for some time without having been recognized.

It runs in families to a considerable degree. I do not say that it is hereditary in the same way as gout and phthisis are; but it runs in some families in a striking manner. I was asked to see a patient suffering from diabetes, who belonged to a family of five, the eldest of whom was not more than eighteen or nineteen. The mother had died of diabetes and the grandmother had died also of the disease. One of the children was brought to me, as I have said, and sugar existed in the urine. I desired to have a specimen from each of the remaining children. In four of the five the urine was saccharine.

There is one point with reference to the disease to which I would like to call your especial attention, and ask you to give it the benefit of your own observation. It is only somewhat recently that my own attention has been fixed upon the matter, and the number of cases I find to be affected in the manner I am going to mention is striking. The remark does not apply to young subjects, but to persons beyond the middle period of life. I used to come across persons who complained of pain in the legs, put down as cases of gout or rheumatism; and I took it as simply coincidental to the diabetes, without anything important in it. But I so frequently met with it that my attention became aroused, and now I find many subjects of diabetes beyond the middle period of life thus affected. There is also more or less ataxia. It is not exactly the pure form of ataxia that is seen in locomotor ataxia, because I have noticed that these persons can stand, maintaining their balance fairly well with their eyes shut. Yet they walk with some difficulty. They cannot properly maintain their balance. They feel often compelled in walking to pull themselves together and make an effort to walk steadier, lest persons behind them may think they have been taking too much. This is what has occurred to me over and over again to hear.

Then, again, with this, there are usually associated some anæsthesia, and hyperæsthesia, and various forms of paræsthesia. Persons feel as though they were walking on pebbles. The flesh is tender, so that when the leg is grasped it gives pain. This comes oftener in the legs than in the upper extremity; sometimes, however, it affects the upper also. Then there is an aching of the bones. The patient complains of it especially at night, in bed. The condition appears to be due to peripheral neuritis.

Treatment.—In young subjects, all we can do is to endeavor to stay the disease for a time. You cannot possibly cure it. At an early stage of the disease in the young subject, you diet the patient—the sugar is removed, and the patient thinks he is cured. Sometimes you are called upon to treat a patient who has been brought to an extreme state of emaciation and weakness, by a sudden and severe invasion of the disease. Placed under proper treatment, the change appears like a resuscitation. He goes on getting better, his hopes are raised, and he thinks he is well. But unfortunately this is not the case. It is a progressive disease. It is a disease which seems to progress in the same way as progressive muscular atrophy or locomotor ataxia, but its advance is uneven. As it advances, the diet and other methods of treatment which succeeded in removing the sugar at first no longer do so; the patient now loses ground and becomes weaker and weaker. You are able at first to keep down the symptoms and the excessive flow of urine; but soon you lose your power to keep them down, and finally something occurs to throw your patient off his balance, and to lead up to diabetic coma, which is the ordinary mode of death in these cases.

It would be a hard and oppressive life to devote one's self only to the treatment of diabetes occurring in young subjects. But the successes obtained in treating the disease in patients of a more advanced age compensate in a measure at least for the failure in young persons.

We must first avoid feeding the disease, and whilst doing this endeavor to convert the wrong action of assimilation into a right one. I lay the greatest stress on diet. I do not think that we can get along in the management of these cases without strict attention to diet. There must, then, be the proper articles of food provided. It is easy enough for the patient to avoid taking some articles of food, as sweets, pastry, puddings, potatoes, etc., but it is not so easy in the case of bread. What he may take may be summed up as consisting of any kind of meat, fish, poultry and game, with eggs, butter, cheese, the various forms of green vegetable food, and a prepared substitute for bread. Milk should only be taken to a limited extent. Some authorities have recommended the free use of milk. But milk contains sugar and milk-sugar behaves in the system exactly as any other form of sugar. I have found that where milk has been taken in large quantity, the sugar has been kept up in the urine; whilst when the quantity of milk was reduced, the state of the urine improved. Certainly it is a hardship for a patient to abstain from bread, and you want to make it as easy as possible for him, by substituting something else of a palatable nature for the article prepared from wheaten flour. I do not think bran, which is often used, is a good substitute, because it contains from 40 to 50 per cent. of carbohydrates and very little else that can be digested and applied. Gluten is better, but it contains a considerable amount of starch. If the gluten is good, it contains only from 30 to 33 per cent.; but I have found some specimens containing 70 to 80 per cent. Perhaps there is no article of food better suited to the diabetic than the almond. There is nothing which seems to supply him better with what is wanted. The almond, rich as it is in nitrogenous material, rich as it is in oily material, is just the article of food to meet his requirements, and palatable products, as a substitute for bread, may be prepared from it.

Medicinal Treatment.—As far as my experience goes, nothing contributes so much to arrest the disease as opium, morphia, and codeia. It is difficult, of course, to say, when you are treating a case with one of these remedies in conjunction with diet, whether the good result you get is not solely the result of dieting. But my own experience is to the effect that my practice, ever since I have been giving these, has been much more satisfactory than it was before I gave them. Clearly these agents appear to exert some power in controlling the disease. It is my custom when I get a patient of forty-five to fifty years of age to put him at once on small doses of opium, morphia, or codeia, and gradually increase. The sugar in the urine diminishes and usually disappears. After a while I permit the patient to take a little bread—say, two ounces a day. If he takes this without a return of sugar I let him gradually increase the quantity until he takes four or six ounces per day. Then I say to him you had better let well alone and stop at this, knowing how readily harm may be done by going beyond what can be taken without occasioning the passage of sugar. As long as sugar does not exist in the urine there is nothing to interfere with a healthy state being maintained. The patient is, to all intents and purposes, in a natural condition as regards his general state. It is only with the voidance of sugar that we get the symptoms of the disease and untoward results.

PRIMARY EPITHELIOMA OF THE ANTERIOR VAGINAL WALL, AND SUPERINVOLUTION OF THE UTERUS.

BY MILES F. PORTER, M. A., M.D.,

PROFESSOR OF GENITO-URINARY SURGERY AND SURGICAL ANATOMY IN THE FORT WAYNE COLLEGE OF MEDICINE.

I VISITED Mrs. P., in company with Dr. J. E. Stultz, whose patient she was, on April 16, 1887, when the following history was obtained: age fifty-eight years, born in England, mother of four children, family history unimportant, menstruated first at seventeen years, menopause at forty years. When fifty years of age, she felt as though a foreign body were in the vagina; and when her bowels moved, or when she urinated, she noticed that some blood "passed," which she supposed to be caused by "piles." This condition continued for some time, finally stopped for some months, when about December 25, 1886, while bathing, she noticed a growth on the external genitals.

Shortly after this, a profuse hemorrhage came on suddenly. These hemorrhages recurred at irregular intervals, until within the past two weeks, since which time no blood has been lost.

No bladder symptoms at any time, except for the past four or six weeks she has had to wait on the vessel a longer time than usual, before the flow would start, though the stream was always full size, and lately, to use the patient's language, "the water scattered."

About the time of the first severe hemorrhage pain commenced, and has been severe ever since. The patient was much emaciated, cachectic, pulse rapid and feeble, temperature 102° Fahr., no appetite, and on lifting the clothing for the purpose of making a digital examination, a fearful odor was perceived.

Digital examination convinced me that we had to deal with an epithelioma, which involved the anterior vaginal wall, and also the anterior part of the external genitals; that the upper extremity of the vagina was not involved; that there was no involvement of the pelvic or other glands; that the proper course to pursue, in view of the pain produced by the examination and the patient's history and condition, was to etherize her, make a more thorough examination, and if no contraindications were developed, to remove the growth as thoroughly as possible, with a view of stopping the fever, which was evidently septic in character, ameliorating the pain, preventing hemorrhage, and thereby prolonging life.

I was unable to discover any trace of the uterus by this first examination, but was able to define distinctly with the finger a depression or opening at the vault of the vagina, which would almost admit the tip of the finger.

The patient was etherized, and the growth removed with the scissors, knife, and curette, after a thorough examination had been made, which confirmed the conclusions drawn from the first, and revealed the further fact that the disease involved the peri-urethral tissues from the meatus to the neck of the bladder, though the urethra proper was not involved. The labia minora, anterior one-half of the mucous surface of the labia majora, clitoris, and anterior half of the vaginal wall for a distance of two inches from the vulva, were completely removed, while the urethra was dissected from the surrounding tissues up to the neck of the bladder, about one-half inch of the distal extremity cut off, and the extremity of the remaining portion brought down and fixed with silk sutures.

Careful examination by Drs. Myers, McCullough, and myself, both before and after the operation, failed to elicit any traces of a uterus, except the depression at the vault of the vagina noted above.

No probe was used, for fear of entering the abdominal cavity. As far as touch and sight could reveal, the growth was completely removed. The woman recovered slowly from the ether and the shock, and for three days was unable to control her water, after which time she had perfect control over it, and passed it without any difficulty whatever. Since the operation she has been free from pain, has had no fever since the fourth day, her appetite is good, and at present writing (May 14th), there has been no return of the growth, though I do not anticipate a permanent cure by any means. Strict antisepsis was observed in the operation, and in so far as possible, in the after-treatment. Hemorrhage was controlled by forceps, no ligatures being required.

The case is important, chiefly because of the rarity of primary epithelioma of the anterior vaginal wall, and because of the extreme degree of atrophy of the uterus. I can find in the literature at hand no record of a case which approaches this one in this respect.

How much of this atrophy is due to the process, called by Simpson super-involution, how much to senile changes, and how much, if any, to the disease present in the vagina, are interesting questions which I will leave for others to discuss. Inasmuch as the meatus urinarius was involved in the disease, it is also rather singular, considering the duration of the malady, that the trouble had not travelled along the urethral mucous membrane to the bladder. I should have added, while speaking of the results of the operation, that there is at present but little discharge, and what there is, is free from any unpleasant odor.

A microscopical examination made by Dr. H. McCullough proved the diagnosis, as to the nature of the growth, to be correct.

106 FAIRFIELD AVENUE.

MEDICAL PROGRESS.

ANTIPYRIN IN PREGNANCY.—CHERON reports the case of a young woman seven months advanced in pregnancy, who was attacked by typhoid fever. Antipyrin was given to reduce a temperature of 108° F. in two doses of seven and a half grains each, at intervals of five hours. The temperature fell rapidly to 94.1° F., attended by cramps, difficulty of speech, obscured sight, and general intellectual oppression. Heat and diffusible stimulants were required to rescue the patient from this condition. The remedy was again tried in six grains given in eight doses, at intervals of three hours; the collapse repeated itself. Still smaller doses were without either good or bad effects.—*Journal de Médecine*, July 31, 1887.

IODOFORM WICKING.—GERSUNG, of Vienna, has found wicking impregnated with iodoform an excellent material for tampons in the drainage of wounds whose secretion is moderate; in Billroth's clinic wicking saturated with tannin and iodoform is used with excellent results. Its removal is much less painful and inconvenient than that of gauze.—*Centralblatt für Chirurgie*, July 30, 1887.

A NEW PEPTONE FOR HYPODERMATIC INJECTION.—RAYNAUD gives the following formula for a peptone made from blood, especially adapted for intravenous, or hypodermatic injection:

Pure blood albumen . . .	gr. 75.
Dialyzed pepsine	gr. 12.
Distilled water	℥ 2½.
Hydrochloric acid	gtt. 19.

The whole should be digested seventy two hours at a temperature of 116° F.—*Bulletin Générale de Thérapeutique*, July 30, 1887.

THE PUPIL AS A GUIDE IN GIVING CHLOROFORM.—NEILSON considers the condition of the pupil a reliable indication of a patient's condition under chloroform anæsthesia, and concludes from his experiments as follows:

1. The effect produced by chloroform on the pupil is at first dilatation, varying in degree and duration, then contraction as the narcosis becomes profound, and dilatation again when the sensibility is returning. If the administration be still continued, with the pupil strongly contracted and motionless, the pupil will also dilate, but in this case more suddenly and completely, and will be coincident with a state from which it will be difficult or impossible to resuscitate the patient. This latter is the dilatation of asphyxia.

2. So long as the pupil dilates in response to excitation by pinching, etc., the patient is not sufficiently narcotized for the operation to be proceeded with, unless the latter is slight and does not require complete anæsthesia.

3. When the pupil becomes strongly contracted and immobile, no more chloroform should be given until it begins to dilate again. If, then, further anæsthesia be required, a little more chloroform should be given till the pupil again contracts.

4. The occurrence of sickness causes dilatation similar to, but more sudden than, that which happens when sensibility is returning, and the efforts of vomiting have the effect of arousing the patient.—*British Medical Journal*, July 30, 1887.

NEISSER'S CALOMEL INJECTIONS FOR SYPHILIS.—HARTTUNG reports good results in ninety cases of syphilis from hypodermatic injections of calomel and olive oil, 1 to 10. Few abscesses, and trifling reaction followed.—*Centralblatt für klinische Medicin*, July 30, 1887.

THYMOL AS A TÆNIFUGE.—DR. NUMA CAMPI has used this remedy successfully in ankylostoma duodenalis, which so frequently produces anæmia, especially among the miners of Italy. It is given as follows: The evening before its administration, after the last meal, ℥ss of castor oil is taken. The following morning, ℥2 of thymol are divided in twelve doses, at intervals of a quarter of an hour, followed by a second dose of oil. Should symptoms of depression arise from the thymol, a stimulant may be combined with it. Its action was always successful.—*L'Union Médicale*, July 14, 1887.

THE RESULTS OF 1881 CASES OF DIPHTHERIA AND 1000 TRACHEOTOMIES.—GUTH, in an extensive collection of statistics, shows that from prior to 1882 the performance of tracheotomy in these cases has fallen from 71.3 per cent. and 68.6 per cent. to 49.5 per cent. at the Lazarus Hospital, in Berlin. Of those tracheotomized prior to 1882 from 65 per cent. to 83.5 per cent. died; since 1882 from 76 per cent. to 58 per cent. have died. The lessened rate of tracheotomy is owing to a milder epidemic; the improved results of tracheotomy are due to the adoption of Langenbuch's procedure; the insertion of a cotton-iodoform tampon, to which a ligature is attached, through the tracheal wound as far as the larynx.—*Centralblatt für Chirurgie*, July 30, 1887.

THE ACTION OF EUCALYPTOL ON THE TUBERCLE BACILLI.—CHABANNES and PERRET have made experiments with a five per cent. solution of eucalyptol to test its action upon tubercle bacilli. Sputum from the tuberculous was treated with the solution, and animals were then inoculated with it. Their experiments showed that eucalyptol has no effect upon tubercle bacilli; the animals died after inoculation with virulent tuberculosis.—*Centralblatt für Bacteriologie und Parasitenkunde*, Band ii. No. 5.

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SATURDAY, SEPTEMBER 24, 1887.

SOME NEW OPERATIONS UPON THE INTESTINAL TRACT.

ONE of the most noteworthy incidents of the International Medical Congress was the reading of a paper by DR. SENN, of Milwaukee, entitled "An Experimental Contribution to Intestinal Surgery, with Special Reference to the Treatment of Intestinal Obstruction." The address was so voluminous, and dealt with so many different topics, that it is difficult to comprehend it in its entirety until we shall have an opportunity of studying it in print.

As the title implies, the work was entirely experimental in character, and while much is to be learned by comparative methods, still we cannot rely implicitly upon information gained in this manner, as the dog seems to be much more tolerant of intestinal mutilation than is man. It seems to us, however, that this work of Dr. Senn is of the very highest importance, and it reflects great credit upon him. It is not possible for us to do more than to notice a few of the problems which are sought to be elucidated.

It is well known that several operators have removed large portions of the small intestine without causing any special disturbance of the digestive functions; thus Kocher excised 5½ feet, and Koeberlé 6½ feet of bowel, the patients surviving and not experiencing any bad effects from the mutilation. One of the questions which Dr. Senn has sought to settle is, How much of the intestinal tract can be excised safely? He found that when more than six feet of the small intestine was resected the dog invariably perished from the immediate effects of the trauma, and that not more than four feet of bowel could be removed without causing such disturbances of digestion and nutrition that the animal soon succumbed. One dog upon which resection of a large portion of the small intestine was practised, lived some months, eating incessantly, consuming enough to feed ten dogs, and emaciating progressively until he died of inanition. Curiously the same impairment of nutrition does not follow the physiological exclusion of an equal length of bowel from the intestinal tract, as follows resection, and fecal accumulation does not occur in the excluded portion. The practical lesson to be deduced from these observations is that better results will follow the formation of an artificial communication between contiguous portions of bowel, in cases in which the obstruction may be allowed to remain, as a cicatricial stricture, for example, than will follow the performance of circular resection.

As every one who has had experience in intestinal surgery knows, time is a most important element. Many patients succumb to shock on account of the length of time required for the performance of intra-abdominal operations, who would survive if the duration of the exposure could be materially shortened. Not only does the long operation expose the patient to increased danger from the anæsthetic, from the chilling of the peritoneum, and from the extensive manipulation required, but the longer the exposure to the atmosphere, the greater the danger from sepsis; hence every effort to shorten the duration of these procedures is a move in the right direction. Owing to the length of time required for the proper execution of the Czerny-Lembert suture in cases of circular enterectomy, Dr. Senn has devised a modification of Jobert's invagination suture; the bowel having been cut squarely across: the intussusceptum is lined with a narrow, flexible rubber ring, and this being introduced into the intussuscipiens, the peritoneal surfaces of the latter are inverted by means of two catgut sutures, until they are in contact with the peritoneal surface of the intussusceptum, and firm union is effected in a few hours. In order to prevent any danger from perforation of the bowel, a graft, two inches in width, taken from a non-vascular portion of the omentum, is laid over the entire line of suture; this graft forms adhesions in twelve hours, and becomes vascularized in twenty-four hours. We believe this idea to be entirely original with the author, and is rational in its aim, and promises to be a great advantage in these cases. Perforation peritonitis has been the cause of death in a number of cases of pylorectomy, and other intestinal resections, and it is for the purpose of preventing this that the omental graft is recommended.

One of the most interesting portions of the address was in regard to the formation of intestinal anasto-

moses. This idea originated with Dr. Woelfler, of Vienna, who sought to overcome the effects of a carcinomatous stenosis of the pylorus, by forming a fistula between the stomach and small intestine; this operation, now known as gastro-enterostomy, has been performed thirty or more times with most satisfactory results in some cases, but the great length of time required for its performance is a very great disadvantage. Lücke, who has had the best results with gastro-enterostomy, consumes from one and a half to two and a half hours in its performance. Senn, in speaking of this operation, said it was a procedure which an expert might perform in an hour, but that by means of the method devised by himself a novice could do it in ten minutes. Starting with the idea that it is only necessary to bring broad surfaces of peritoneum together in order to have union occur, and that this union occurs quicker when the tissues are irritated by scratching with an aseptic needle, he effects apposition by means of two partially decalcified bone plates with a lumen corresponding to that of the fistula which is to be formed, and these are secured with four silk sutures. An incision is made into the stomach, and a bone plate slipped in, and each of the four sutures is passed directly through the stomach walls with needles. A similar opening is made into the intestine, a plate slipped in, and the threaded needles passed through its walls. The corresponding sutures are tied, and the stomach and bowel are brought into accurate contact. The plates eventually become absorbed, and the threads are discharged, leaving a permanent fistula. The same principle can be applied to the formation of an "intestinal anastomosis" in any portion of the tract, and this recommendation is a distinct advance in the treatment of many of the surgical affections of the intestine.

This operation is recommended in all cases in which it is either impossible or unadvisable to remove the obstruction, provided the cause of the stenosis is not *per se* a source of danger. In some cases a lateral implantation of the small intestine into the large intestine is recommended, which is performed as follows: a slit is made in the colon, and the cut end of the small intestine, which has been lined with the rubber ring previously mentioned, is slipped into the slit and secured with a few sutures; thus we may have an ileo-colostomy or ileo-rectostomy, and this method is applicable to all parts where the resected portions do not correspond in calibre. As has been stated, these procedures have only been practised upon animals, but if it shall be found that they are equally as successful upon man, a revolution in the treatment of intestinal lesions is bound to follow. Let us hope that this desirable result will be effected.

YELLOW FEVER VACCINATIONS.

THE profession will await with great interest the report of Dr. Sternberg, the Government expert, recently sent to Brazil to study the methods of vaccination against yellow fever introduced by Dr. Freire, whose most recent communication we presented to our readers in last week's issue. It is satisfactory to note, in the first place, that he has been able to demonstrate the microbe to so reliable an authority as Professor Cornil, of Paris; for there have been serious, and not unnatural doubts, whether he was dealing with any definite microörganism. Certainly the figures of the plates of his large work, published in 1885, were in themselves sufficient to discredit the entire research, and we are not surprised at Cornil's reproach, to which he alludes. There were indications, then, of an untrained, unscientific mind, and the confusion expressed in the present paper between *cryptococcus* and *micrococcus* is astonishing in any one professing to be a skilled bacteriologist. It is claimed that the organism is a chromogenic micrococcus (?), producing two different pigments, one yellow and the other black, the former staining the tissues, the latter appearing in the vomit. The description which he gives of it, is exceedingly indefinite, and in no particular will Dr. Sternberg's work be more welcome than in a clear and accurate definition of the structure and relations of this organism.

The vaccine is prepared by first passing the virus through six or seven guinea pigs, and then cultivating in beef-broth or gelatine. At the tenth or twelfth generation from the primitive microbe the virus is found to be sufficiently attenuated for purposes of vaccination. The practical results of the investigations are of extreme interest, and the figures which he gives of the vaccinations during the years 1885 and 1886, impress us much more than any other part of his work. A mortality of only 8 in 6524 vaccinations, means that either insusceptible persons were the subjects, or else that we have here in reality a mitigated virus capable of protecting against this terrible scourge; and let us hope that Sternberg's researches may confirm this latter view.

FLANNEL VERSUS RUBBER BANDAGES.

THERE are contingencies constantly arising in which it becomes necessary to apply a bandage, and it depends much upon the skill with which it is applied, as to whether beneficial, negative, or positively bad results are to follow. A properly applied bandage gives comfort, and in numerous instances exerts a positively curative effect, and this effect may be materially influenced by the fabric out of which the bandage is made. It is not a matter of indifference as to the material used for the bandage. In many instances muslin torn into narrow strips is used for

all purposes; but it is as rational to use one drug exclusively in the treatment of any given disease as to use the same material in every case in which it is desirable to apply a bandage.

For the retention of wound-dressings, thin materials, as gauze, or cheese-cloth, are much preferable to muslin, as they can be applied better, and do not slip so easily; whilst for the retention of splints, in the treatment of fractures, there is a tendency to replace bandages with adhesive plaster, which holds more firmly, and has the advantage of leaving the seat of injury open to inspection. When firm compression is desired, as in the treatment of ulcers of the lower limbs, muslin is generally used; but of late years it has become fashionable to use Martin's pure rubber bandage, especially when there is a varicose condition of the veins; and it must be admitted that, in many instances, admirable results are obtained by its use. It has, however, some very great disadvantages, due to the fact that the secretions of the skin cannot pass through the bandage, and the limb is constantly bathed in perspiration. This is not only unpleasant, but—in hot weather especially—the parts become offensive, and unless great care is exercised, and even when every precaution is taken in some cases, an eczematous condition is produced, which is distressing to the patient and aggravating to the local affection. Aside from these objections, the heat of this bandage is very unpleasant during the summer. For these reasons we prefer a good quality of flannel to any other material for bandaging the limbs.

Flannel absorbs the perspiration, and neither produces nor aggravates an eczematous condition of the skin; it is sufficiently elastic to supply the pressure which may be desired, and the roughness of its surface effectually prevents its slipping. It is the coolest bandage which can be effectively applied, owing to its capacity for absorption, and, in our experience, has answered a better purpose than any other material.

THE Volunteer Medical Corps during the recent three-days' Constitutional Centennial Celebration at Philadelphia reported 384 casualties, of various degrees. The list includes a fatal fracture of the skull; a fatal fracture of the ribs and sternum; a fracture of the wrist and ankle; 7 lacerated wounds; 1 uterine hemorrhage; 20 cases of epilepsy; several quotidian agues; numerous cases of syncope and exhaustion from overexertion; and 1 case of acute dementia. In view of the large number of people who were collected on the line of the procession, the relatively small number of accidents speaks well for the character of an American crowd, and is in marked contrast with the 600 casualties reported on the single day of the Queen's Jubilee in London.

Great credit is due to Medical Director Cleborne and his efficient staff for the admirable manner in which the details of the medical service were carried out. The presence of the medical officers with their ambulances, stationed at short intervals along the route, gave a feeling of security to the spectators and added in no small degree to their peace of mind.

THE new building of the College of Physicians and Surgeons of New York, will be inaugurated on next Thursday, with an Historical Sketch of the College by Dr. J. C. Dalton, and an Inaugural Address by Joseph H. Choate, Esq.

THE subscriptions toward founding the Pasteur Institute at Paris now amount to 1,872,625 francs.

THE late French journals announce the death, at Paris, of M. Giraud-Teulon, one of the most eminent of French ophthalmologists.

SOCIETY PROCEEDINGS.

AMERICAN GYNECOLOGICAL SOCIETY.

Twelfth Annual Meeting, held at New York, September 13, 14, and 15, 1887.

(Specially reported for THE MEDICAL NEWS.)

WEDNESDAY, SEPTEMBER 14TH.

DR. C. D. PALMER, of Cincinnati, read a paper on

THE THERAPEUTIC VALUE OF SOME MEDICINES IN THE TREATMENT OF HEMORRHAGIC CONDITIONS OF THE UTERUS.

Referring to the fact that gynecology has assumed a decidedly surgical tendency, he said that too little attention has been paid to the less brilliant medicinal treatment. Uterine hemorrhage can often be treated advantageously by means of drugs, such as ergot, digitalis, cannabis indica, bromide of potassium, arsenic, and gallic acid. Ergot is especially useful in cases of chronic hyperæmia and subinvolution of the uterus, attended by menorrhagia, where the organ is soft and relaxed, and of interstitial and submucous fibroids. Hemorrhages due to fungous endometritis, ovarian and parametritic inflammation are not favorably affected. Digitalis is useful in uterine hemorrhage due to cardiac disease.

Cannabis indica is an uncertain drug, acting rather upon the nervous system. Bromide of potassium is a sedative in ovarian irritation and congestion and thus is useful in certain forms of menorrhagia, as well as in the treatment of hemorrhage from subacute and chronic pelvic peritonitis.

Arsenic acts by improving the general condition, and hence is of value in the menorrhagia of young women and at the climacteric, also in malarial conditions. He gave Fowler's solution in three minim doses. Active cathartics often exercise a favorable effect in checking uterine hemorrhage, especially if there is evidence of obstruction to the circulation from habitual

constipation. In general, the administration of iron during the intermenstrual period is not advisable, unless the patient is markedly anæmic.

Hydrastis Canadensis has been highly recommended as a hæmostatic in uterine hemorrhage from any cause. Garrigues has obtained good results with *gossypium herbaceum*, especially in cases of fibroid tumor. Hamemelis is inferior to ergot for the relief of sudden hemorrhage, but is useful in the treatment of long-continued flux, where the hemorrhage being of a passive character, the uterus is soft and flabby.

DR. FORDYCE BARKER said that he had found arsenic to be a valuable drug in the treatment of hemorrhages, of excessive flow at the time of the menopause, where vasomotor irritability was especially prominent. It exerts a direct influence upon anæmia of vasomotor origin. He is accustomed in treating such cases to administer full doses of the bromides during the time immediately preceding the flow, giving arsenic during the intermenstrual period.

Hydrastis Canadensis is of most value if given after the flow has begun. If there is marked vasomotor irritability he adds five or six minims of the tincture of nux vomica. Viburnum is a useful drug in menorrhagia and metrorrhagia, where the hemorrhage is of a passive character, especially in early pregnancy, and in threatening abortion; it is a valuable uterine sedative.

He agreed with the author as to the importance of relieving the portal circulation, which was accomplished by the use of mercury and saline laxatives. In cases where the uterus was large and flabby, iron and opium should be administered during the intervals between periods.

DR. LLOYD ROBERTS, of Manchester, said that he did not have much confidence in any drug but ergot in the treatment of passive hemorrhage from the uterus. It is important to use a good preparation. He inferred that the author did not reject local treatment. He had often found that by giving ergot in the intermenstrual period more good was accomplished than when it was administered only during the fever. He thought that quinine was more useful than arsenic in menorrhagia of malarial origin. Gallic acid is the next best remedy to ergot in hemorrhage from mucous membranes. Might not its value be directly due to its local effect? Bromide of potassium is only useful in ovarian congestion, or in conditions where the nervous element is prominent.

DR. BALLS-HEADLEY, of Melbourne, thought that it was important that prominence should be given to the medicinal treatment of pelvic affections. He did not see how the remedies acted *per se*. For instance, in the case of fibroid tumors, the vessels around the exterior of the tumor are so large that it is difficult to see how they can be affected by muscular contraction, since the muscular fibres cross in so many different directions. We must know exactly where the tumor is located, else there may be danger that the tumor will be expressed into the peritoneal cavity, instead of into the cavity of the uterus. He had given ergot for years, and did not have the slightest faith in it. We must consider the natural history of these tumors; some remain stationary for years. He had tried local applications of ergot without result. He had used the tincture of the chloride of iron in half-drachm doses thrice daily with good effects.

DR. GRANT (Bey), of Egypt, reported a case of uterine hemorrhage, in a syphilitic patient, which was cured by mercurial treatment after all other hæmostatics had been tried in vain. The patient had a large fibroid tumor which also disappeared under the administration of mercury.

DR. H. R. C. WILSON, of Baltimore, had little confidence in any uterine hæmostatic. In young girls with irregular and excessive menstruation it is necessary to care for the general health. Obstinate constipation is a common cause of uterine hemorrhage. He depends most on ergot when the uterus is flabby and relaxed.

DR. CHADWICK, of Boston, had found chian turpentine to be especially valuable. In one case, a young lady had been flowing for two years, and had been treated without effect. Under six grain doses of the turpentine, repeated thrice daily, the hemorrhage ceased promptly. He believed that it is better to give ergot between the periods, and aromatic sulphuric acid at the time of the flow.

DR. REID, of Glasgow, said that in flabby, anæmic patients, where no marked local disease could be found, he had given twenty grains of alum daily with good results. He had used gallic acid, but without benefit. The iodide of arsenic had been useful in his hands.

DR. PALMER closed the discussion by saying that he had been surprised at the indiscriminate way in which these remedies had been employed. He had endeavored to lay down a few rules which might serve as a guide in using them.

DR. DOLÉRIS, of Paris, delivered, in French, an address on

ALEXANDER'S OPERATION,

of which the following is a very brief abstract:

He first described the normal supports of the uterus. These are twofold, the tissues forming the pelvic floor, and the uterine ligaments, the former being the principal support. According as these supports are weakened, displacements of the organ may occur, which vary in their degree from simple retroversion to complete procidentia. The minor degrees of prolapse may be cured by restoration of the pelvic floor and vaginal outlet alone; this is also true of cases of prolapse combined with anteversion. For the other displacements shortening of the round ligaments, combined with posterior kolpo-perineorrhaphy, offers an efficient means of restoring the organ to its normal position and retaining it there. He alluded to the results of his experiments on the cadaver, and to the success which had followed his operations on the living subject. From his early position as a sceptic on the subject, he had come to place great confidence in the operation popularized by Alexander.

DR. REID, of Glasgow, said that he had no doubt of the value of the operation in suitable cases, but we should remember that the *position*, not the *condition* of the uterus was altered. Months might pass before much benefit was felt. He thought the external ring should be clearly exposed, then, by pressing on the canal above, the fat and fibres of the cord would be found.

He had never failed to find it in fourteen cases. The after-treatment is very important; the patient must be kept in bed for six weeks, and must wear a pessary for at least six months more.

DR. MARTIN, of Berlin, said that the operation had been done only a few times in Germany, perhaps not more than a dozen. He was pleased to see that M. Doléris had changed his opinion favorably with regard to the operation. He would himself perform it in a suitable case, but he had had a large experience with prolapsus and had found that in most of the cases the patient had no serious symptoms. He did not believe that the round ligaments alone support the uterus, since the pelvic floor is the true support. Hegar was the first to point out that only by restoring this floor could the displaced organ be kept in position; his operation on the posterior wall accomplished this.

DR. LUSK, of New York, said that he had been very slow to accept the operation, but after watching Dr. Polk operate he had been led to perform it several times. It was free from danger, and there was no reason why it should not be employed in the case of workingwomen, where pessaries had been tried in vain. The paper was especially valuable in laying down positive indications for the operation. There was no doubt that in aggravated cases anterior and posterior kolporrhaphy did not keep the uterus in place. He had performed Hegar's operation for several years, but it was not sufficient.

DR. H. MARION SIMS, of New York, said that he had performed Hegar's operation a number of times with good results.

DR. LEE, of New York, had performed Alexander's operation nineteen times, and had found it particularly useful in cases where pessaries could not be borne, by reason of chronic salpingitis, and where the uterus was large and procident. In the latter cases it is absolutely indispensable to perform Emmet's operation on the perineum simultaneously. He highly endorsed the operation in properly selected cases. Hysterorrhaphy is useful where the uterus is adherent, but it is much more serious than Alexander's operation and can never take its place.

DR. LAWRENCE, of Bristol, England, had not performed the operation himself, but had seen a number of cases in which, after the lapse of several months, the patients were little, if any, improved.

DR. KELLY, of Philadelphia, thought it was folly to expect a heavy uterus to be suspended by the round ligaments alone, when the vaginal canal was patent. When there was a large, heavy uterus an operation must be performed first, in order to narrow the vagina. When this has been done, the fundus could be held in position by a slight attachment. The trouble in the Alexander-Adams operation was that, in lifting the heavy, procident uterus, its entire weight was thrown upon the ligaments; the same was true in cases of old retroflexion. He had recently performed hysterorrhaphy successfully, and twelve successful cases had been reported in Germany.

DR. DOLÉRIS, in closing the discussion, repeated that when the uterus was anteverted and procident, the plastic operation on the vagina was sufficient, without shortening of the ligaments.

DR. ALEXANDER J. C. SKENE then delivered the

PRESIDENTIAL ADDRESS.

Just twelve years ago, he said, the American Gynecological Society was organized in the Academy of Medicine, Dr. Fordyce Barker presiding. The idea of founding such a society had been conceived by Dr. Chadwick, of Boston. The results had been highly gratifying, since the organization could now compare with any in the world. It had served to promote not merely an interchange of ideas on scientific subjects, but social intercourse among its Fellows. The fact that men of science were becoming united in one grand family was proved by the fact that there were present at the meeting representatives of nearly all parts of the civilized world, a circumstance which was not possible in the past.

He alluded to the fact that modern gynecology was not much more than seventy-five years old, yet wonderful progress had been made in it, especially in the department of surgery. At least ten of the most heroic operations in surgery were gynecological; over 780 gynecological instruments had been devised, exclusive of the different varieties of needles and sutures. About three hundred different pessaries were in use. During the last three-quarters of a century about six thousand books on diseases of women had been published, and in the past eight years seven thousand five hundred and five journal articles and pamphlets on this subject had appeared.

The new antiseptic method had added remarkably to the successful results of surgical gynecology. Surgery still held too prominent a position, however; but it would eventually find its true position. The time would come when enthusiastic surgeons would stop and consider what was the real value of their work, while greater prominence would be given to the medical treatment of functional and organic diseases.

DR. GEORGE GRANVILLE BANTOCK, of London, then read a paper on

THE TREATMENT OF THE PEDICLE IN SUPRAVAGINAL HYSTERECTOMY.

He said that in his first case of hysterectomy he had divided the pedicle by means of the cautery, according to Baker Brown's method, but, on removing the clamp, the hemorrhage was so profuse that it was necessary to ligate the broad ligaments separately. The stump was then tied in two portions and secured at the lower angle of the abdominal wound, but was left within the peritoneal cavity. The ligatures slipped, oozing into the peritoneal cavity occurred, and the patient died of septicæmia on the fourth day, in spite of the strict observance of antiseptic details. This manner of treating the stump is the very one so strongly commended by Sänger and Schröder, but he had been so impressed with its fallacy that he resolved never to try it again. In the next case he used Cintrat's serre-nœud, but found it inefficient, and was obliged to substitute Koeberlé's for it, which he subsequently changed for the instrument which he now uses. He had found that fine, soft iron wire was preferable to either copper or steel.

Several cases were cited at length, showing the efficiency of the serre-nœud in completely controlling the hemorrhage during the removal of large tumors. In

one instance the reader neglected to apply the supporting pins before excising the fibrous mass, and, although the stump was encircled by the wire of the écraseur, it slipped through the loop and fatal hemorrhage occurred. In one successful case the pregnant uterus was removed together with a fibrocyst weighing thirteen pounds. In his forty-fifth case he applied the serre-nœud just below the level of the ovaries and partially tightened it, then included the broad ligaments in long hæmostatic forceps, thus securing the large vessels. The peritoneal covering of the uterus and tumor was then divided three inches from the wire loop and was reflected toward the latter. After tightening the loop, the pins were inserted an inch from the wire, and a second serre-nœud was applied just behind the pins, after which the first was removed. In this an additional half-inch was gained in the pedicle, and the strain on the broad ligaments was relieved.

In a subsequent case this method was still further modified by first reflecting the peritoneal envelope, while temporarily securing the broad ligaments, and then applying the loop; the ovaries were subsequently ligated separately. Where the broad ligaments were redundant, and were thrown into folds in tightening the loop, it was important not to trim it away until it was secured by several hæmostatic forceps, preparatory to stitching it over the stump, otherwise the divided fold might escape from the loop and give rise to hemorrhage. By uniting the edges of the peritoneum across the stump, this retraction was prevented, when from the shrinking of the tissues the loop became loosened.

The treatment of the stump after supravaginal hysterectomy is a very different thing from that of the ovarian pedicle, yet the two have been regarded as identical. The differences are great. He had no fixed prejudices in the matter, but simply spoke from the results of his own experience, when he said that the intraperitoneal method has been as uniformly disastrous as the extraperitoneal has been successful.

To summarize, the following conditions may be presented:

1. The broad ligaments may be so long and the ovaries so easily raised from the pelvis that the whole can easily be included in the loop.

2. One ovary can be included, while it will be necessary to ligate the other separately.

3. Both ovaries must be ligated separately.

4. The tumor may grow between the folds of either broad ligament, so that it must be partially enucleated.

5. The tumor may be situated so low down in the body of the uterus that it will be necessary to separate it largely from its peritoneal covering before a sufficient pedicle can be formed.

The proper recognition and management of these complications severely test the judgment and coolness of the operator, and can only be learned by experience.

In regard to the after-treatment of the stump, he said that, if it was properly secured at the time of the operation, the less it is interfered with the better. He had sometimes allowed two weeks to elapse before disturbing the dressings. The main object is to keep the stump dry, therefore the dressings should be changed as soon as they become moist. Perchloride of iron should not be applied to the stump, because it is unnecessary and may be injurious. If the wire is properly applied at the time of the operation, it will not be necessary to tighten it again for four or five days, unless there is marked oozing; if the pedicle is small it is not necessary to tighten the loop at all. There is no hurry about getting rid of the stump so long as it remains dry; if pus should begin to ooze from around it after the lapse of a week, it may be treated with iodoform, or the hole may be washed out with a solution of one part of sulphurous acid in nine parts of water, until the sloughing tissue has been removed, the opening being subsequently filled with a mixture consisting of equal parts of glycerine and alcohol, the latter arresting suppuration and promoting healthy granulation.

Appended to the paper was a table showing 45 recoveries out of 57 cases in which the pedicle was treated extraperitoneally, with 4 deaths out of 5 in which it was treated intraperitoneally.

On motion, the discussion of this paper was postponed until the following day.

AFTERNOON SESSION.

DR. JAMES B. HUNTER, of New York, reported

A CASE OF ACUTE DILATATION OF THE STOMACH FOLLOWING LAPAROTOMY.

The operation consisted in the removal of both tubes and ovaries for disease of the latter organs of several years standing, which occasioned severe dysmenorrhœa. The patient vomited at intervals after the operation until her death, which occurred on the eighth day, the vomiting being peculiar, in that large quantities of fluid were regurgitated without much straining. The abdomen became greatly distended and tender, the temperature rose to 101°, and it was supposed that she had succumbed to a low form of peritonitis. The autopsy revealed extreme dilatation of the stomach, the organ filling the abdominal cavity and extending to within three inches of the symphysis, while the intestines and omentum were crowded into the pelvis. There was no evidence of old or recent peritonitis. Death was clearly due to exhaustion. The stomach contained over a gallon of fluid and showed marked atrophy of its coats, especially of the muscular. The natural inference was that there had been a long-standing gastritis, which led to an atonic condition of the organ, and that the latter under the influence of some causes acting after the operation suddenly dilated. The history of the case, and the results of the physical examination, showed that the enlargement had taken place after the operation. There was no pyloric obstruction. What these causes were it is difficult to say. It might have been due to the poor condition of the patient, the vomiting, or (as explained by Morris) to the rapid secretion and accumulation of gastric fluid. The patient had had an omental hernia, a condition which Kussmaul believed favored, or directly caused dilatation, by reason of the direct traction exerted on the fundus of the stomach.

He remarked that two questions suggested themselves in connection with the case, viz.: Could the complication have been foreseen before the operation, and ought it to have been recognized and treated subsequently? While it would have been impossible to foretell the sudden dilatation, the case taught the lesson that every patient who was about to be exposed to the

risks of laparotomy should be thoroughly examined, since only in this way could the integrity of every organ be assured. Gynecologists were too apt to confine their attention exclusively to the pelvis, at the risk of overlooking complications in thoracic or abdominal viscera.

In reply to the second question, it must be urged that the condition of the stomach was so very rare that it was quite excusable to mistake it for the obscure form of peritonitis which is so frequently encountered after laparotomy. Treatment would have been of little avail considering the condition of the patient, still it was possible that if the dilatation had been recognized earlier and the fluid had been removed by the stomach-tube the patient might have been saved.

In conclusion the author referred to the rare occurrence of the complication and cited reports of similar cases by Fagge, Goodrich, Morris, and others, Morris's case being almost identical with the one described in the paper.

DR. A. REEVES JACKSON, of Chicago, read a paper on

THE INTRAUTERINE STEM IN THE TREATMENT OF FLEXURES.

He confined his remarks to a limited class of cases. Many forms of flexion require no treatment, others are not improved, and still others are only made worse. He had not been satisfied with the results of incision and dilatation. He had used the stem for many years without bad results. Dysmenorrhœa is the main indication for treatment, sterility being a secondary consideration. His method of treatment is first to dilate by means of graduated bougies, then after a menstrual period he inserts a soft rubber stem, and keeps it in position by means of glycerine tampons. After six weeks a larger stem is used. As soon as the uterus becomes straightened, a permanent stem of vulcanized rubber is introduced, Chamber's bifurcated stem being especially useful. Recently he had employed one which did not separate at the end. This hard stem is worn for three months, and is then removed. The patient is examined in the course of a few weeks, and if the uterus remains in position it is removed. The success of the treatment lies in its *gradual* character.

The use of the stem had been severely condemned, but clinical experience showed its value. The speaker had seen great benefit, dysmenorrhœa and sterility being both removed. Many hold that pelvic inflammation is the main cause of pain in flexions, but the reader did not believe in the doctrine of such frequent inflammation. The stem when carefully used is no more dangerous than an intrauterine application. He had never seen any inflammation follow the use of the stem in his hands. The great trouble is that men try to straighten the organ too rapidly and forcibly, and without reference to the existence of subacute inflammation. He never uses a stem unless there is dysmenorrhœa; when the flexion is due to a fibroid or to pelvic inflammation, it should not be used. Out of sixty-seven cases treated with the stem, forty-one were cured. The conditions necessary for success are watchfulness, patience, and slow progress.

DR. OGDEN, of Toronto, was in accord with the paper. The uterus must always be straightened gradually, or harm would be done. If the organ is gradually accustomed to a foreign body, the result will be different, than if the stem is introduced at once. The speaker used tampons of dry cotton, dusted over with boracic acid, as it gives a better support than moist cotton.

PROF. LAWRENCE, of Bristol, said that in England stem-pessaries are received with general disfavor. His own plan of treatment is to proceed very slowly, dilating gradually with bougies, and then introducing a stem expanded at its upper end. He cited the case of a married lady who had been sterile for fourteen years, and who became pregnant after straightening the uterus. The main thing was to be sure that the whole trouble was due to the flexion.

DR. JACKSON closed with the remark that it is impossible to introduce pessaries into the canal of a flexed uterus, at least in the case of some American women.

DR. APOSTOLI, of Paris, read, in French, a paper on

SOME NEW USES OF THE CONSTANT CURRENTS IN GYNECOLOGY.

Alluding to the fact that loose and empirical methods of employing electricity in medicine had given place to the use of regular mathematical standards for regulating its strength, he compared the galvanometer to the balance in chemistry. Now, in employing the continuous current, it is always necessary to take into account two factors, the duration of the application and the intensity of the current expressed in milliampères. Thanks to the technique now adopted, it is possible to use a much higher dosage than formerly: when strong currents are employed, there is a caustic action at each pole, while the "trophic action," or nutritive changes will increase in the same proportion. In galvano-caustic applications within the uterus, it is intended that one pole shall cauterize freely, while the other, which is placed upon the skin, must be carefully watched, in order that it shall not cause pain and vesication. This is prevented by giving to the indifferent pole a large surface, so that the current shall be distributed over a large extent of skin, as well as by keeping it moist. By using the reader's pole, constructed of glazed earth, it is possible to apply currents varying from fifty to two hundred and fifty milliampères without causing pain or injury to the skin. This has made galvanism a valuable agent in uterine therapeutics.

Formerly, local applications were confined to the cervix uteri, now we know that it is the mucous lining of the body of that organ that forms the seat of inflammatory processes, dangerous by reason of the readiness with which they are transmitted to the appendages. It is necessary to attack the diseased mucosa directly, which can be done more safely and thoroughly by means of the constant current than by the curette; the former accomplishes the results more slowly, but surely, not only curing the endometritis, but also dispelling inflammations of the parenchyma of the uterus. The reader began, in 1882, to practise electrolysis in cases of uterine fibroid, his treatment being mainly directed to the interior of the uterus, for the following reasons:

1. The endometrium is nearly all diseased in cases of fibroma, and hence the hemorrhage will be checked by cauterizing it.

2. By modifying the nutrition of the mucosa, that of the adjacent neoplasm is also affected.

3. By introducing one pole into the uterus, the ope-

rator would be able to place the organ directly in the current. The reader was invariably accustomed in all forms of metrorrhagia, to place the positive pole within the uterine cavity, using the negative pole in other cases. As the result of his experience in nearly three hundred cases, he was ready to affirm that from ninety to ninety-five per cent. of fibrous tumors would, under this treatment, when continued from three to nine months, decrease in size from one-fifth to one-half, while the hemorrhages would be quickly and permanently arrested and the pressure symptoms would disappear.

The sphere of the constant current in gynecology was not confined to the treatment of endometritis and fibrous tumor of the uterus; its future was a great one, and the reader believed that it would in time constitute the principal curative agent in the medical treatment of pelvic troubles.

DR. CHADWICK said that he had followed the author's method of treatment during the past six months, but had not met with satisfactory results. In one instance the size of the uterus was definitely reduced after a few applications; in another, after eighteen applications, there was no appreciable change. In two instances pain and fever were produced, and two cases terminated fatally.

DR. APOSTOLI closed by repeating that he had treated over three hundred patients by electricity for the relief of various pelvic affections, and very rarely seen any serious results follow the applications.

DR. CHADWICK, of Boston, read a paper on

THE OPERATION FOR VENTRAL HERNIA AFTER LAPAROTOMY.

He said that hernia usually appears a year or more after the operation. Supporting bandages do but little good. The symptoms are pain and dragging sensations in the abdomen. Strangulation does not occur, due to the fact that the neck of the hernia is large and yielding. If intestines or omentum are adherent, the hernia cannot be reduced. Hernia is more frequent than is supposed, but the data are imperfect. The incisions are now quite short, the wound heals better, and the pedicle is treated intraperitoneally, so that the abdominal wall is shorter.

The use of the drainage-tube may cause hernia. The prevention of this accident is highly important. Some operators close the peritoneum separately. Dr. Wylie has called attention to the importance of drawing up and uniting the edges of the divided fascia. The union of the fascia is the most important obstacle to hernia. The sutures must be placed near together, and the abdominal tension must be diminished immediately after the operation. Laxatives should be used only to this end.

Simon used to operate on these herniæ without opening the abdominal cavity. This method was imperfect, as it did not result in union of the fascia. As regarded the operation for repair, it was merely an explorative incision, with the exception that in hernia the peritoneum might, or might not, be adherent. If intact, should it be opened, or simply pushed back into the cavity?

The muscles and fascia would be found to have retracted, and should the peritoneum be separated from them? Wylie dissected off the peritoneum; Hoffer sutured the peritoneum, fascia, and recti separately; Maydl denuded the edges of the recti muscles and sutured them. The author, in his case, had sewed the peritoneum separately.

[Dr. Chadwick then read the report of a case in which he had operated successfully for ventral hernia after laparotomy, and showed photographs.]

The discussion was adjourned to the following day.

THE BUSINESS MEETING

was held in the evening. The following were elected

OFFICERS FOR THE ENSUING YEAR.

President.—Dr. Robert Battey, of Rome, Ga.

Vice-Presidents.—Drs. James R. Chadwick, of Boston, and A. Reeves Jackson, of Chicago.

Secretary and Treasurer.—Dr. Joseph Taber Johnson, of Washington.

Members of Council.—Drs. F. P. Foster, of New York, C. D. Palmer, of Cincinnati, J. B. Hunter, of New York, and R. S. Sutton, of Pittsburg.

The following were elected

FELLOWS.

Dr. Howard A. Kelly, of Philadelphia; Dr. Horace T. Hanks and Dr. Bache McE. Emmet, of New York; and Dr. R. P. Kinloch, of South Carolina.

It was resolved to hold the next meeting in Boston, on the third Tuesday in September, 1888.

(*To be concluded.*)

NINTH INTERNATIONAL MEDICAL CONGRESS.

Held at Washington, September 5–10, 1887.

(Specially reported for THE MEDICAL NEWS.)

SECTIONS.

Obstetrics.

WEDNESDAY, SEPTEMBER 7TH.

DISCUSSION ON CÆSAREAN SECTION.

PROFESSOR SIMPSON, of Edinburgh, in opening the discussion, expressed himself as very largely in accord with the views so clearly formulated by Professor Lusk in his able paper, further illustrated by Dr. Sänger and Dr. Wathen. He wished to maintain for the obstetrician and the general practitioner the right still in certain cases of difficult labor to break up the head of the child to save the mother's life. Certainly the cases are few, in which the sacrifice of the child's life is demanded, and they are becoming more rare as the sanitary conditions of population improve. In Edinburgh, rickets even is becoming very rare; and as for malacosteon, the only case he has seen for many years occurred not in a pregnant woman, but in one who suffered from dyspareunia in consequence of the narrowing of the pubic arch. The result is that the indication for any form of head reduction is very seldom met with.

But this also narrowed the opportunity for gaining experience in the Cæsarean operation. He had no doubt that the field of application of laparotomy would extend with the appreciation of the conditions under which it can be successfully carried out. It is important in regard to the prognosis to differentiate between two groups of cases. In the first, the practitioner does not get the chance of operating until the woman is exhausted, the child may be dead, and dangerous septic processes are already at work. In such cases, it sometimes gives the patient the best chance of recovery to

open the abdomen and uterus, and without regard to his own reputation the practitioner finds it his duty to give her that one chance. In the other group of cases, the practitioner has the patient under observation before labor sets in, and can choose his time and mode of interference. In such cases a successful result may almost always be expected, and when Sänger and Leopold have diminished the mortality of the method with the sero-serous suture, he (Prof. S.) believed that most obstetricians would feel themselves constrained to adopt the Sänger method in carrying out the operation. The Porro procedure will still have its application in a few instances, as when the uterus is damaged, or the seat of disease; but he thought Professor Lusk had rendered a good service in impressing on the profession the importance of attaining clear impressions as to the conditions of safety in Cæsarean operations.

DR. A. MARTIN, of Berlin, summarized his remarks in the following propositions: The abdominal operation is indicated,—1. When it seems impossible to bring a living child through the pelvis in any way. (Take care not to operate too soon!) 2. In cases of neoplasmata; myomata narrowing the canal, or endangering the progress of parturition; carcinomata colli. 3. Other reasons: diseases which show the lives of mother and child endangered by the process of parturition and puerperium.

What operation? Cæsarean section when we can hope that the patient may be able to become pregnant again, even if the operation must be repeated. The Porro operation, or total extirpation, when the character of the tumor, or its seat, or the disease is necessarily fatal.

DR. BALLS-HEADLEY, of Australia, said that the main points in this class of cases are a clear diagnosis that the child cannot be born through the natural passages and a determination to carry out the necessary operation without attempting measures believed to be futile. He limited himself to the two conditions—cancer of the cervix and contraction of the pelvis. Twenty years ago, he assisted Dr. Greenhalgh, of London, in a case of Cæsarean section on account of epithelioma of the vaginal portion. The child and mother survived; the cancer subsequently disappearing. Recently he had seen a case of labor, the cervix the seat of malignant infiltration. He thought craniotomy, with nicking of the cervix, would meet the indication, and the operation was performed. The cervix was rent, and the woman died. In such a case, he would now extirpate the womb.

At a little village, near Bonn, diseases of the bones were frequent, and he remembered one woman who had been the subject of the operation six times. At the beginning of this year, a dwarf, four feet high, came to him. She was in the seventh month of pregnancy. The true conjugate diameter measured one inch. At the ninth month, he performed Porro's operation, mother and child surviving. The membranes were found to be adherent, and in view of the certain inability of escape of discharge by the os, it is quite probable that had the uterus not been removed, the patient would have died. The operation was easy, occupying only twenty-five minutes.

DR. W. W. JAGGARD, of Chicago, said, with reference to the *relative indication* for Cæsarean section—that is, a pelvic contraction in which the conjugata vera measures 2½ to 3⅜ inches—1. Craniotomy does not require any higher degree of operative skill than it is fair to presume every qualified obstetrician possesses, provided good instruments are employed—for example, Carl Braun's curved trepan and cranioclast. 2. The mortality of the operation in pelvic contractions of 2½ to 3⅜ inches, when the woman has not been antecedently infected, and average skill with antiseptic precautions is applied to good instruments, is, as remarked by Barnes, practically *nil.* The statistics of the Vienna school abundantly demonstrate the truth of this statement. 3. An essential condition to the relative indication for Cæsarean section is the consent of the mother, obtained without direct or indirect coercion. He had never seen a woman elect Cæsarean section, when all the facts in the case had been fairly and honestly presented to her. 4. He was under the impression that there is much sentimentalism in the recent extraordinary interest in the child's as compared with the mother's life. The satisfaction of saving the child by Cæsarean section is akin to the delight experienced after the successful performance of a difficult scientific experiment. This interest ceases so soon as the fact of the birth of a living child has been demonstrated to witnesses and the case recorded as successful. As a matter of fact, the expectancy of life in such children is very much less than in those of normal birth. More than seventy-five per cent. perish within a brief period of their entrance into the world.

DR. W. T. LUSK thought the limit for craniotomy should be placed at a conjugata vera of 2¾ inches; below this limit the indication for Cæsarean section is absolute.

DR. J. A. DOLÉRIS, of Paris, desired to call attention to two facts:

1. It is customary in France to deliver the fœtus per viæ naturales, whenever this is possible, even if the child be sacrificed. Under antiseptic conditions the maternal mortality is *nil.* He had performed craniotomy with perfect success, when the conjugata vera measured considerably less than 2½ inches. 2. It is of grave prognostic moment when the incision in Cæsarean section passes through the placental site. The danger is from secondary internal hemorrhage. The immediate cause of this hemorrhage is uterine inertia; the uterine inertia is frequently produced by the elastic ligature, applied around the lower uterine segment, paralyzing the motor centres of the uterus, and rendering ergot entirely ineffective. He recommended instead of continuous compression by the elastic ligature, temporary compression by the hands.

DR. J. A. DOLÉRIS, of Paris, read a paper entitled

TREATMENT AND RESTORATION OF THE NECK OF THE UTERUS DURING PREGNANCY.

He narrated the histories of four cases of bilateral laceration of the vaginal portion, in which Emmet's operation was successfully performed during pregnancy. Among the symptoms indicating operative procedure, the following were noted, exaggerated nervousness, incoercible vomiting, rebellious pelvic neuralgias, threatened abortion. He drew the following conclusions: 1. The importance of traumatism of the neck of the gravid uterus has been too much exaggerated.

2. When the condition of the neck of the uterus demands surgical reparation, the menace of abortion, instead of being a contraindication, justifies the operation. During and after the operation, anti-abortive medication to be instituted—*i. e.*, chloroform, absolute rest, and opiates. The danger from hemorrhage is not greater than in the non-gravid uterus.

PROFESSOR LEISHMAN, of Scotland, while admitting that preconceived opinion is a serious barrier to the general admission of new truth, desired to express a hope that the Section would receive with great caution any such statements as seemed to be involved in the conclusions assumed by Dr. Doléris in his paper. He did not venture to deny that there might be exceptional instances, in which such an operation was warranted, but what he wished to express emphatically was, that operation on the cervix during pregnancy was (as in the case quoted by Dr. Doléris) very liable to lead to abortion, and that if such an operation is to be admitted at all, it should only be in very exceptional instances and after careful consideration of the special circumstances of a given case. He trusted the Section would not express any opinion in favor of the operation without making this perfectly clear.

DR. THOMAS OPIE, of Baltimore, said that a lady had been sent to him by her physician in January last, for treatment for lacerated cervix. He fully trusted her statement and verified the diagnosis of her attendant. He operated on the bilateral laceration of the cervix with the result of an abortion about the sixth week. The delicate relationship between the embryo and uterus, the fact of many pregnancies going to full term despite lacerations, and his own warning would make him timid about all surgical operations on the gravid uterus.

DR. JOSEPH KUCHER, of New York, read a paper entitled

ON THE RELATION OF THE ATMOSPHERE TO PUERPERAL FEVER.

It has been conclusively demonstrated that we are unable to render a locality absolutely free from germs, and the question then arises, What influence has air impregnated with germs upon the parturient female, particularly can such air cause puerperal fever? The older physicians, though not ascribing the origin of every case of puerperal fever to the surrounding air, were thoroughly convinced that at certain times, epidemics of puerperal fever had been started by atmospheric influence alone. So-called nosocomial malaria was frequently supposed to be the cause of puerperal fever, until Semmelweiss pointed out that this disease always originates from the absorption of septic matter through lesions in the genital tract, and that the instruments and the fingers of the physician and nurse are the chief means of introducing this septic matter to the numerous foci of absorption. Coincidently with this view, fear of the deleterious influence of the atmosphere abated.

When we have once come to the conclusion that the danger from atmospheric influence is insignificant, as contrasted with the dangers of infection from contact, we will not commit such mistakes as narrated by Le Fort, in which an epidemic numbered among its victims the daughter of a colleague. To secure the greatest possible safety from epidemic influence, the patient was delivered at her country seat, and died there of puerperal fever. Careful examination disclosed the fact that the nurse had recently been in attendance upon four women, who had died with similar symptoms; though no case of puerperal fever had occurred in the practice of other midwives, or of the two physicians living in the vicinity. The original infection of the nurse had been through a case of fistulous abscess of the thigh.

DR. T. MORE MADDEN, of Dublin, presented a paper on

THE PREVENTION AND TREATMENT OF PUERPERAL FEVER.

which was then read.

That a disease so many-sided in its genesis and propagation can ever be completely eradicated by any hygienic or antiseptic measures, seems to the author utopian.

The following preventionary measures were recommended:

1. The most scrupulous attention to puerperal hygiene.

2. The preparatory treatment of the patient—suitable nourishment, fresh air, and appropriate tonics—of primary importance.

The author ordered a mixture of potassium chlorate, iron, and quinine, to be taken during the last couple of months of gestation, and he has never seen puerperal septicæmia in a patient who had been thus treated before her confinement.

3. From the first day after delivery until convalescence has taken place, the uterine cavity as well as the vagina should be daily thoroughly washed out with water, as hot as may be well tolerated, to each pint of which may be added an equal quantity of sanital, which, from its absence of color, as well as its aseptic properties and agreeable odor, seems specially suitable for the purpose. Carbolic acid and rectified spirit of turpentine are good, while corrosive sublimate is unreliable and dangerous.

4. He does not use a siphon syringe, but employs More Madden's irrigator.

5. As a general rule, liquor creasotæ (B. P.) should be administered two or three times daily in full doses. This may be advantageously combined with the tincture of the chloride of ron.

6. The prevailing type of puerperal fever is of a distinctly remittent typhoid character, and should be primarily treated by appropriate general stimulants and nutriments, as well as by attention to the removal of all septic matter from the uterus, in the way already pointed out. Turpentine, iron, quinine, ergot, and opium, are the only medicines that deserve consideration. Turpentine, the most important, may be exhibited per os, or per rectum, or by the skin. Turpentine is stimulating, depurating, increasing the elimination by the skin and kidneys, and arrests the development of microörganisms.

General Medicine.

THURSDAY, SEPTEMBER 8TH.

DR. W. F. PAVY, of London, made the following remarks on

DIABETES,

speaking entirely without manuscript, and stating in explanation that he had time only to arrange his

thoughts in a concise form, but not to submit them to writing.

(See page 357.)

DR. HERRICK, of Cleveland, remarked that it had afforded him great pleasure and delight to listen to Dr. Pavy's remarks on this subject. He desired, however, to ask one question with regard to the treatment of the disease. Dr. Pavy had stated that he looked on the urine as the index of the disease—the presence or absence of sugar. Yet in speaking of the disease, he referred to it as an incapacity for the assimilation of saccharine material in the circulation of the liver. Did Dr. Pavy give anything to aid in the assimilation of this principle?

DR. PAVY replied that at the beginning of the disease, when the patient was dieted, the sugar in the urine diminished, and that after the treatment he had described was continued a while, the sugar entirely disappeared. You now make the test of allowing the patient a little bread. When this can be given without producing saccharine urine, he looked on it as an indication that the assimilative power had become greater.

DR. A. B. ARNOLD inquired whether the observations of Dr. Pavy would lead him to agree with the statement that diabetes is more frequent in the Hebrew race than in others.

DR. PAVY replied that his observations coincided with this statement; and not only that, but he had also found that the disease in the Hebrew is more amenable to treatment.

DR. TROAX asked whether death in diabetes is due to acetonæmia, as has been stated.

DR. PAVY replied that he was not a believer in acetonæmia. In response to a question by Dr. Holt, of Vermont, Dr. Pavy stated that although the bromides had been extensively used within the last few years, he had not much faith in them.

DR. R. W. PHILLIP, of Edinburgh, Scotland, forwarded a paper on

THE ETIOLOGY OF PHTHISIS,

which was read by Dr. Stockman, of Edinburgh.

It was not his intention, the author said, to discuss the pathological conditions present in phthisis, nor yet its dependence upon the bacillus tuberculosis. He would start, on the contrary, with the acceptance of the doctrine of the unity of phthisis, as well as that of its dependence upon the presence of the bacillus. The observations of Koch had, in his mind, established these facts. He desired rather to deal with the causes of the principal symptoms—progressive emaciation and asthenia, increasing hæmatosis, and the absorption of waste products. He desired especially to emphasize the absorption of waste products. What, then, is the immediate action of the bacillus tuberculosis in causing death? Their toxic powers are not limited to their presence, but are due in all probability to a product of their action. We know that a distinct variety of fermentation follows the introduction of a certain microbe into a medium, and that the exclusion of the microbe warrants the absence of this fermentation.

The author's investigations of the lesions in organs as well as of the sputum were then narrated at some length, together with a consideration of the methods employed. Most important was that in which he used a carefully prepared alcoholic extract of the sputum. Of this extract a small dose was given to frogs. These animals at once showed indications of having been poisoned. The symptoms in all cases were the same. Depression rapidly ensued without, however, the presence of other phenomena. In mice also it was found possible to produce toxic symptoms with a small dose of the extract. When a large dose was given, the intensity of the depression was proportionately increased. The most interesting point in the experiments was, however, the fact that when small doses were given to animals for a period of several days, progressive emaciation gradually ensued, and at the same time, fever and great thirst were observed.

The experiments were then continued in connection with the administration of certain remedies. It was found that atropia was antagonistic to the action of the toxic principle contained in the extract. Little notice had been made of the treatment of phthisis by atropia, and the author was aware of no author who gives it prominence but Bartholow, in his *Therapeutics*. In conclusion, he said, that it seems probable that the sweating, the fever, and probably to some extent the emaciation of phthisis, are due to the presence of a ptomaine, to which atropine acts to some extent as an antidote.

DR. WM. B. NEFTEL, of New York, then read a paper on

THE ETIOLOGY OF SOME OF THE DISEASES OF WOMEN.

Tight lacing was the chief etiological factor discussed. In accordance with the customs of the times, the author had resorted to experiments on dogs. Bandages were placed around the waists of the animals and drawn so tight as to occasion not a little discomfort, even, in some instances, alarming dyspnœa, compelling the removal of the band. When the animal was killed after having undergone the tortures of tight lacing for a time, there was found an engorgement of the blood-vessels of the abdominal organs. To what degree it differed from the usual post-mortem engorgement was not accurately stated. Tuberculosis was not produced. The evils of the "corset-liver," causing engorgement of the liver and interfering with its chylopoietic functions, were referred to.

General Surgery.

THURSDAY, SEPTEMBER 8TH.

DR. DONALD MACLEAN, of Detroit, said that the mortality in olden times was largely due to the defective measures of controlling bleeding. The method described by Dr. Dennis seems open to the objection that the elastic band might slip, when the operation was delayed. He had amputated the hip a number of times, and has had the utmost satisfaction from the use of Lister's abdominal compressor. He believes that it is superior to any other method for controlling hemorrhage in this region. If the compressor is not at hand the fists of an assistant will answer the purpose, the compression being made on the umbilicus.

DR. WEEKS, of Portland, Me., has employed an elastic compressor consisting of the ordinary black rubber bandage, doubled so as to make four strands two feet in length. This is passed between the thighs, brought

between the tuberosity of the ischium and the rectum, and up in front of the femoral artery. An ordinary roller bandage is placed over the artery. The ends are brought over in front and held by an assistant. This also controls hemorrhage from the gluteal vessels.

DR. REYHER, of St. Petersburg, thought that in emaciated subjects it would not be advisable to make such sudden compression as is caused by Lister's compressor. He had used the rubber tourniquet, but without special satisfaction. He had performed another operation. He made an excision of the head of the bone, and then placed one stick through the wound and another in front, securing them together by rubber bands. The same thing is done with the posterior portion. The flaps can then be cut without hemorrhage. In these operations he had no disagreeable results from this measure.

DR. W. BOONE, of Shanghai, China, said that no one had alluded to the method proposed by Dr. Furneaux Jordan. Where there is sufficient tissue free from disease, this seems to present many advantages. This operation is performed by making a circular cut through the muscles low down, making a flap, and then turning back the flap. The bone is next divided. An excision of the head is next made. In this way you cut the vessels low down and the control of bleeding is absolute.

DR. PALMER, of Jonesville, Wis., had used a method similar to that of Dr. Reyher. Instead of sticks, he passed pieces of sharpened steel wire through the limb in front and behind the bone, and then secures them to other pieces in front of and behind the limb.

DR. CHAVASSE, of Birmingham, Eng., said that in amputations for malignant disease, the less tissue left the better, therefore the operation of Mr. Furneaux Jordan is not a good one for this particular disease. The best method is that known as Brodie's operation, by anterior and posterior skin flaps. In children, the best plan for controlling hemorrhage is by digital compression. This is also applicable in thin subjects. He had also used Davy's rectal staff with satisfaction.

DR. ASSAKY, of Bucharest, Roumania, then read a paper on

IODOL.

He said that wounds unite under iodol by first intention. This union, however, being the result of various and complex conditions attending operation, it is not possible to attribute to iodol alone the absence of suppuration and inflammatory conditions. In wounds which gape and suppurate iodol is an excellent antiseptic. It rapidly retards suppuration, renders it inodorous, reduces the frequency of dressing, and hastens considerably cicatrization. In ulcerating or gangrenous wounds iodol aids to resist the destructive process, and changes the wound, after a variable time, to a healthy granulating condition. This action of iodol extends itself to hard chancres. In case of soft chancres the result is variable. Sometimes it transforms them into a simple wound with brief delay; at others it is insufficient for this purpose, and it becomes necessary to employ in addition, locally, antiseptic lotions. The same is true with reference to open venereal buboes of the groin. The powdered iodol has this advantage over iodoform, that it is free from odor and is not toxic in its effects.

Doses of iodol of from $\frac{1}{10}$ of a grain to 30 grains daily, produce no functional trouble, even if continued a long time. These doses give marvellous results in tertiary syphilis and in scrofulous affections. In the secondary stage of syphilis, taken internally, it rapidly destroys the syphilitic manifestations. Iodol seems to aid the general nutrition and increase strength and flesh. It is indicated in all cases of specific malnutrition. Iodol is an antipyretic. In acute infectious diseases, such as erysipelas, etc., it causes a rapid fall of temperature.

MR. EDMUND OWEN, of London, read a paper on

PARACENTESIS OF THE ARTICULATION IN THE EARLY STAGES OF DISEASE OF THE HIP-JOINT.

It is generally admitted that the sero-synovial effusion, associated with early acute disease of the hip-joint, has an influence on the stiffening and faulty position of the limb. In these cases examination will usually show a deep-seated fulness below the middle of Poupart's ligament, which advances the femoral vessels toward the surface. There is also swelling behind, between the great trochanter and the tuberosity of the ischium. An illustrative case was given. A boy, nine years of age, was admitted to St. Mary's Hospital, London, on account of extreme pain in the right hip and knee. The limb was semiflexed, and the foot slightly inverted. The attempt to bring down the limb caused tilting of the pelvis and arching of the loins. There were all the signs usually regarded as indicating the first stages of hip-joint disease. There was slight fulness in the positions indicated. The pain had come on suddenly two weeks previous in a child apparently healthy. Chloroform was administered, but the leg remained stiff. A trocar and canula were passed through the back of the capsule, and a teaspoonful of sero-purulent fluid containing flakes of lymph was withdrawn. The femur could then be extended, and the joint was loosened. An extension apparatus was applied, and the patient put perfectly at rest. On the fourth day he was free from pain. The convalescence ran a perfect course, terminating in recovery in two weeks.

It may be said that this was not a case of hip-joint disease, but one of simple synovitis. This was admitted, but if the capsule had not been tapped there might have developed suppurative arthritis. If this is admitted, the author claimed that potential hip-joint disease might be cured by paracentesis. We should always be on the lookout for this condition. Where we cannot be absolutely certain that there is distention, we should give the patient the benefit of the doubt, and perform exploratory puncture. This, if done with clean instruments and ordinary care, is devoid of risk.

DR. L. H. SAYRE, of New York, believed that the case related if allowed to go on, would probably have ended in rupture of the capsule and, perhaps, destruction of the head of the bone. In the early stage of the disease, where the limb is flexed, everted, and abducted, as a result of over-distention of the capsular ligament, if the fluid is not absorbed by rest and counter-irritation, it is proper to puncture the joint, thus treating the hip-joint the same as any other joint.

DR. G. W. BOONE, of Shanghai, said that two years ago his attention was called to the injection of joints with glycerine and iodoform. He used it in two cases where there was evidence of the first stage of hip-joint disease. In one case the symptoms disappeared, while

the other case ran the ordinary course of a case of hip-joint disease.

DR. LANGE, of New York, said that in the case reported the child probably had tubercular disease near the hip-joint, which ruptured into the joint, causing effusion. In such cases the painful symptoms can be relieved by tapping the joint. To regard this as an effective treatment for hip-joint disease, which must be regarded in children as essentially a tubercular affection, seems hardly proper. This case is not concluded, and we do not know what the final result will be.

DR. OWEN said this was not a case of tubercular process in the joint. The attack began two weeks before admission; was an acute effusion, and recovered within two weeks after operation. Tuberculosis does not run this course.

DR. BURNAYS, of St. Louis, had one case of epilepsy and mania for which he trephined. There was a clear history of injury to the head. The skull had been trephined without good effect. He also trephined, and when the bone was removed the dura mater came up into the opening. This he incised and at once there was an enormous flow of cerebro-spinal fluid. He introduced four catgut sutures to close the opening in the dura mater. The patient recovered, but there was no immediate improvement, although since then there has been some lessening of the number of the seizures.

DR. T. R. MANLY, of New York, reported a case of

GUNSHOT WOUNDS OF THE ABDOMEN

in the left epigastric region. The patient was seen two hours after the injury. The abdomen was greatly distended and evidently contained fluid. The wound was probed with great care, but the point of entrance into the abdomen could not be found. An incision was then made in the linea alba. When the peritoneum was punctured about half a gallon of blood escaped. The hemorrhage was from a branch of the inferior mesenteric artery. This was secured with a ligature. A double perforation was found in the descending colon; this was closed with the Lembert suture, including only the serous and muscular layers. The bullet was not found. The abdominal incision was closed and dressed antiseptically; it, however, failed to unite; in other respects the patient did well. The incision was again closed, the peritoneum being united with a separate row of sutures and the other layers with silver wire. On the third day it was found that the central portion of the wound had opened, but that the peritoneum had united. The patient eventually recovered completely.

DR. ROBERT NEWMAN, of New York, read a paper on

THE USE OF THE GALVANO-CAUTERY SOUND, PARTICULARLY IN HYPERTROPHY OF THE PROSTATE.

The instrument consists of a smooth sound with a fenestra at its lower extremity; at this opening is a piece of platinum wire in connection with a galvano-cautery battery. By pressing a key in the handle of the sound, the platinum wire is heated to a bright red color. This does not destroy tissue. The instrument is introduced until the lower extremity reaches the prostate gland, when the current is passed through the platinum wire. These applications are repeated at intervals of three to five days. The author has employed this method of treatment in fifteen cases, seven of these being cases of hypertrophy of the prostate gland. In all these instances there was improvement in the symptoms presented and a decrease in the size of the prostate.

DR. F. LEMOYNE, of Pittsburg, read a paper on

UNUNITED FRACTURE OF THE FEMUR SUCCESSFULLY TREATED BY DOUBLE SPLICE AND WIRED CLAMP.

The method described had been employed in three cases, two of the humerus, and one of the femur. In the femur case the various procedures employed in cases of ununited fracture were tried, but no union followed. Eight months after the accident the mobility at the seat of fracture was very distinct. The seat of fracture was then exposed by two incisions, one on the anterior and the other on the external aspect of the limb. The fragments were found attached by firm bands of fibrous tissue and the bone tissue was softened; the intervening tissue was cut away. The lower extremity of the upper fragment was then sawed off so as to form a wedge-shaped piece. The upper end of the lower fragment was sawed so as to leave a corresponding V-shaped depression. The extremities were then brought into apposition. A hole was made in each fragment so that the two openings were two and a half inches apart. A steel clamp, its extremities being bent at right angles, was laid upon the anterior surface of the femur, the ends being inserted into the holes already prepared. This was secured to the bone by three bands of wire encircling the limb at the seat of fracture. The limb was placed on a posterior inclined plane, the foot being elevated about eight inches. Sole-leather splints were applied on the external, anterior, and internal surfaces, and the patient was kept as quiet as possible. High inflammatory action with free suppuration occurred. In five weeks there seemed to be some union and the clamp and wire were removed. The limb was still kept in leather splints. One year after the operation, there was good union. The patient could bear his entire weight on the limb. There was, however, shortening to the extent of two and one-half inches.

DR. T. R. MANLY, of New York, said he had had considerable experience in wiring the shafts of bones, particularly in fractures of the thigh. If there is much shortening we should wire the bone at once. We do no harm by making a free incision down to the bone and the silver wire causes no irritation. He leaves them in permanently and the results have been satisfactory.

GYNECOLOGY.

THURSDAY—SEPTEMBER 8TH.

DR. JOSEPH TABER JOHNSON, of Washington, read a paper on the

TREATMENT OF THREATENED OR COMMENCING PERITONITIS AFTER LAPARATOMY BY BRISK PURGATION.

The idea of the propriety of administering purgatives when peritonitis was imminent or present after laparotomy had been performed, occurred to the author about three years ago, while attending a patient under such conditions, together with persistent vomiting. Several small doses (fractions of a grain) of calomel were given in quick succession, the bowels were freely moved, and the patient recovered. The theory of this

method of treatment was that intestinal peristalsis was encouraged and the serous accumulations in the abdominal cavity which accompany peritonitis were absorbed, passed into the intestine, and carried off. Lawson Tait had advocated the same plan, and also Wylie, of New York. Tait's idea was that the free purgation which was excited in this condition, answered the purpose of drainage. The method is more logical, theoretically, than the use of opium, since the latter paralyzes the muscular power of the intestine, and thus favors peritonitis. Three cases were narrated in which life was probably saved by the timely administration of calomel and Rochelle salts, and it is now a customary plan of procedure with the author to keep the bowels open after the third or fourth day following laparotomy, instead of keeping them confined for a week or ten days, as was formerly the custom.

DR. A. MARTIN, of Berlin, then read, in German, a paper on

TOTAL EXTIRPATION OF THE UTERUS PER VAGINAM FOR CARCINOMA.

He thought that sufficient material was now at hand to decide two questions which should be asked concerning every new method of surgical treatment. Those two questions were:

1. Is the success of the operation such that it will promise good results to other than very expert operators?

2. Does the extirpation of the uterus for cancer offer permanent results which are superior to those obtained by any other method of treatment now employed?

It must be admitted that the published reports of operations in English and German literature are still meagre and isolated, though there can be no question that the operation has obtained a decided recognition in Germany. The results of the operations have greatly improved as experience has increased. Thus, in 1881, Olshausen collected 41 cases, with a mortality of 29 per cent.; while, in 1886, Hegar collected 257 cases, with a mortality of 23 per cent. The author has collected a table of 311 cases, extending to the end of 1886, the operators being Fritsch, Leopold, Olshausen, Schröder, Staude, and himself, in which the mortality has been only 15.1 per cent. From the gradual improvement in the results, the belief seems warrantable that this mortality will become still smaller. Even now the results as to immediate mortality are better than obtained in Küster's recently published table (1883) of 778 cases in which amputation of the breast for cancer was performed. The author believes, therefore, that this operation deserves a prominent position among the different methods for treating the cancerous uterus.

As to the question of permanency of result to those who recover from the operation, after tabulating the cases of Leopold, Schröder, and Fritsch, the author gives the result in his 44 cases, in which recovery had taken place, all the operations having been performed previous to 1886. Of these 44, there was recurrence in 13, the remaining 31, or 70.3 per cent., were still in health.

The supravaginal operation of Schröder for that form of cancer of the cervix, which is developed from the pavement epithelium covering its mucous membrane, is recommended by Hofmeier, as the more radical operation. The author's experience in that respect, however, has not coincided with Hofmeier's, since 6 cases out of 28 were fatal and all of the others succumbed within less than three years from recurrence. After the high excision pregnancy is not impossible, and Hofmeier himself considers that such an event would be fraught with great danger to the patient. The author, therefore, prefers the operation for complete extirpation of the uterus in all forms of cancer of the cervix, the operation being indicated only in those cases in which the tissues surrounding the uterus are entirely free from cancerous infiltration. If a radical operation is performed when the tissues are infiltrated a permanent cure should not be expected.

The technique of the operation has little bearing upon the results. It matters little whether the wound remain unclosed, or be closed and drained. The ovaries and tubes should be removed if practicable and all hemorrhage checked. There is no evidence that those who recover experience any loss as to sexual feelings of feminine form. The author, therefore, recommends this operation as the most suitable one for all cases in which the cancerous disease is limited to the uterus itself.

DR. R. JACKSON, of Chicago, read a paper entitled

MODERN TREATMENT OF UTERINE CANCER.

The great difficulties surrounding this subject were stated to be our want of exact information as to its beginnings, and the uncertainty which attends operative procedures as to the complete removal of diseased elements. The diagnosis should not only determine the existence of the disease but also its extent. Since this is practically impossible who can tell when an operation has been radical in its scope?

The best results from operative procedures thus far, with reference to subsequent immunity from the disease, have been obtained by the use of the actual cautery. Supravaginal operations of the various types have also given excellent results. The statistics for the complete extirpation of the organ by abdominal operations are so discouraging that it is not strange that the operation has been practically abandoned. The results from vaginal hysterectomy with a few operators have been much better, but when we compare these and the duration of life of those who survive the operation with the estimated duration of life for those who have uterine cancer but do not submit to operation the balance is largely in favor of non-interference. Recurrence of the disease after vaginal hysterectomy takes place in four and a half months on the average, and this is certainly no better than can be obtained by less radical procedures. If hysterectomy has a field, it is in connection with disease of the body of the uterus, and this occurs with comparative infrequency, and is very difficult of diagnosis. In the author's opinion the attempt to establish hysterectomy as a suitable operation has been unsuccessful. His conclusions are:

1. Any operation for cancer which does not completely remove the disease will be followed by recurrence.

2. During life the limit of cancerous disease originating in any part of the uterus cannot be known; hence, no operative procedure can afford a guarantee of complete removal.

3. In view of this fact no operation is justifiable which greatly endangers life, provided other and safer means are available.

4. Vaginal hysterectomy is more dangerous, in a certain sense, than the disease which it is designed to remedy. Some individuals will live longer without the operation than with it.

5. Other methods less dangerous than hysterectomy are available for ameliorating and retarding the progress of the disease. They also show as good results as regards recurrence, hence, they are to be preferred.

6. Vaginal hysterectomy does not avert or lessen suffering; it is not a useful but an injurious operation, and, therefore, is unjustifiable.

DR. MARTIN, of Berlin, remarked that the statistics which Dr. Jackson had used were old and inapplicable to the present status of hysterectomy. Of his (Martin's) statistics for hysterectomy which gave data to the end of 1886, 66 cases alone could be used as cases of cancer. Of that number, 44 remained cured more than a year and a half after they had been operated upon.

Dr. Cordes then read, for DR. VUILLET, of Geneva, a paper entitled

THE BURIED SUTURE WITH IODOLIZED SILK IN VESICO-VAGINAL FISTULA.

The author has as yet tried this material in the manner specified in the title of the paper in but one case. The result, however, was perfectly satisfactory, the wound being aseptic, and doing well, and he thought the method worthy of further trial.

A second paper by the same author was read entitled

THE DILATATION OF THE UTERUS BY PROGRESSIVE OBTURATIONS.

The method consisted in repeated pluggings of the cavity of the uterus with iodoformed gauze, under perfectly antiseptic conditions. Each plug or tampon was allowed to remain twenty-four to forty-eight hours, and six to eight operations were usually necessary to obtain the required degree of dilatation. By that time the cavity had become so large that its entire surface could be photographed or inspected with the naked eye. The operation was considered especially useful for the investigation of cases of malignant disease and intra-uterine new growths in general. It was asserted that no septic accidents had ever resulted from the operation, the means of dilatation constituting a perfectly antiseptic dressing, and also exerting as great a degree of dilatation as could be desired. It was also observed that this operation had a very favorable effect upon women suffering from neuroses, in the same way that pregnancy does.

DR. TRENHOLME, of Montreal, read a paper entitled

EXTIRPATION OF THE UTERUS FOR BLEEDING MYOMA.

One great difficulty in the treatment of such cases consisted in the treatment of the pedicle, the conditions of the stump being usually very unfavorable for such treatment, especially if the extraperitoneal method be used. The author's plan in such cases was, first to split the tumor through the centre, then enucleate each segment in turn from its peritoneal covering. The two flaps which were thus formed were then brought together and closely united with a cobbler's stitch. A stump being now made, it could readily be brought up to the surface of the body and clamped. Or the pedicle might be dropped, and the author thinks this method superior to that with the clamp. In some cases he had cut out the tumor by means of a wedge-shaped incision, which was then closed with a layer of deep followed by a layer of superficial sutures. Silver sutures were preferred in all cases in which it was possible to use them. Should peritonitis supervene, he had usually been able to control it by using hot fermentations.

DR. CLARKE, of Boston read a paper entitled

URETHRAL CARUNCLE, ITS HISTOLOGY AND PATHOLOGY.

Various opinions were cited with regard to the structure and significance of these bodies. The intense annoyance and pain to which they give rise suggest an abundant supply of sensory-nerve filaments. The author had made a careful histological study of the subject, and the results were seen in a series of microscopical sections, which were photographed and projected upon an illuminated screen. The conclusion of the author was that the caruncle is a papillomatous new growth which may be of indefinite duration, but does not tend to retrograde metamorphosis.

DR. NELSON, of Boston, then read a paper on

THE RELATION OF MICROÖRGANISMS TO UTERINE MYOMATA.

A single case was reported in which a microbe was discovered in and cultivated from an uterine myoma. The author stated his case with the greatest reserve, and did not presume to draw any positive conclusions from such limited experience. The greatest care had been exercised in the cultures, which had been made upon agar-agar at a temperature of 100°, and had reached the fifth generation. Tubes containing the fourth and fifth generations were shown. The microbe resembled that of anthrax, morphologically, being about half the size of the latter. Photographs of it were projected upon an illuminated screen.

THE REMOVAL OF UTERINE MYOMATA BY ABDOMINAL SECTION.

DR. DUNLAP observed that in his early experience the greatest difficulty attending these operations concerned the treatment of the pedicle. He found it a good plan to make flaps of peritoneum, cover the stump with them, and stitch all together with the cobbler's stitch. He believed that in most cases myomata should not be operated upon. In more than forty years' experience he had found that the maximum of development in nineteen cases out of twenty was reached before the tumors became a source of danger to life. If an operation were done he thought the use of the clamp should be avoided, if possible.

LARYNGOLOGY.

THURSDAY, SEPTEMBER 8TH.

DR. W. E. CASSELBERY, of Chicago, Ill., read a paper on

NASAL FIBROMATA.

He gave the history of a case in which he removed the growth with a galvano-cautery écraseur, employing a steel piano wire instead of the usual one of platinum.

The growth was attached to the ethmoid and its base was thoroughly cauterized. There was no return seventeen months later. He closed with the report of seven other cases which he had collected.

DR. COOMES, of Louisville, Ky., related a case of fibro-myxoma of the nose, which recovered after removal of the growth.

DR. E. FLETCHER INGALLS, of Chicago, Ill., reported two cases in which there had been an extension of the growth into the pharynx. He believed that cocaine did not always sufficiently prevent pain and that frequently hemorrhage followed its use.

DR. CHARLES STOCKTON, of Buffalo, N. Y., favored the compound platinum and iridium wire.

DR. CASSELBERY had used a ten per cent., and even stronger solution of cocaine by means of the cotton applicator.

DR. J. O. ROE, of Rochester, N. Y., read a paper on

CHOREA LARYNGEALIS,

in which he described this affection and related four cases. A spasmodic cough in the first could only be relieved by hypodermatic injections, but in the end disappeared suddenly.

Internal medication and pneumogastric nerve galvanization was the treatment in another case. A third had nocturnal coughing spells.

MR. LENNOX BROWNE, of London, England, was not in accord with Dr. Roe in what he called chorea laryngis. He had seen choreic movements of the larynx without cough. He had seen several coughing cases and thought they were fairly common. One woman, he recalled, who always got this laryngeal cough during pregnancy, but which left her with the advent of quickening. In one case the cough was removed by the removal of an enlarged tonsil. A second case was cured by a sojourn at the seaside, but this treatment failed to relieve a second attack, though a sea voyage had the desired effect.

DR. ROE concluded by explaining that hysterical coughs were often enough caused by diseased nostrils, enlarged tonsils, and other causes apt to excite reflex disturbances. Of course, such cases were not choreic. The distinctive difference between a nervous or reflex laryngeal cough and one due to chorea was in the presence of choreiform twitchings of the laryngeal muscles as seen by laryngoscopical examination. The cough is not diagnostic. Chorea laryngis can only be positively diagnosticated with the laryngoscope.

DR. F. M. COOMES, of Louisville, Ky., read a paper on

THE DELETERIOUS EFFECTS OF TOBACCO ON THE THROAT AND NOSE.

For years he had observed the effects of tobacco upon consumers. In his experience smoking caused more harm than chewing. Snuff chewing is almost wholly confined to women, especially those of a certain class. Tobacco has a bad local effect. Chronic pharyngitis is the commonest result, and is due to both chewing and smoking. Many ministers' sore throats are tobacco throats. He related illustrative cases. Smoking causes great injury to the air passages. The nasal mucous membrane of inhalers of tobacco smoke is generally hypertrophic. Smokers have probably worse throats than chewers, because they use an inferior kind of tobacco and keep the heated smoke in contact with the mucous membrane for a time. It has been said that all the irritation from the use of tobacco is not due to nicotine alone, but also to the burning of certain potassium salts formed in the tobacco. Crystals of potassium salts can even be detected upon the stems of the leaf after stripping, and from these many kinds of tobacco are largely manufactured. The noses and throats of fully ninety-five per cent. of tobacco chewers and smokers he ventured to say are more or less in a pathological state. He has seen many smokers with a swollen epiglottis and vocal cords, which he supposed were largely due to persistent coughing in the effort to bring up tenacious mucus.

DR. STOCKTON, of Buffalo, N. Y., considered this a very interesting subject, especially for laryngologists. Holland has the largest proportion of smokers and America of chewers. His experience showed that chewing is worse than smoking. If it is a fact that potassium salts act so badly on mucous membranes, why use them as was customary? He objected to the use of any of the potassium salts, especially upon the mucous membranes. The worst case of atrophic cataract he ever saw was caused by the use of these salts. Its effect is to tan the mucous membrane, and it is used in tanning hides. The nicotine cannot do much harm, as it is driven off by the heat. Cigarette smokers may get nicotine, but cigar and pipe smokers, as a rule, would not, as they do not inhale, He thought that chewers absorb more nicotine than smokers do.

MR. LENNOX BROWNE, of London, Eng., remarked that sailors lead pretty physiological lives because forced to do so, and the use of tobacco is diminishing among them. Tobacco certainly is highly deleterious. He used it himself and did not give it up because it afforded him a great deal of enjoyment. Chewing must certainly be worse than smoking. Sir Henry Thompson had said that cigarette smoking is the least harmful of the modes of using tobacco, especially if a new holder is often obtained. His tobacconist always supplies him with a new holder with each 100 cigarettes. He had noticed that snuff takers are more apt to have nasal polypi than any other class of persons.

CORRESPONDENCE.

THE ADVANTAGES OF THE PLASTER-OF-PARIS JACKET.

To the Editor of THE MEDICAL NEWS,

SIR: In your journal of the 3d instant I notice a quotation from an article by Dr. Bruns, of Jitomir, Russia, which appeared in the *London Medical Record* of July 15, 1887.

The gentleman seems to be under the impression that he has discovered something new in the use of water-glass for making spinal supports, in place of plaster-of-Paris; whereas it was done years ago, and then condemned, because the silicates are not porous, and so imprison the insensible perspiration which is continually taking place, whereas gypsum allows it to evaporate.

To prove the porosity of a plaster-of-Paris jacket, make a small one over a tumbler as a model, and then, after withdrawing the tumbler, cover the ends also with

plaster-of-Paris bandages, and make a hole in one end large enough to admit the stem of a lighted tobacco pipe. Now blow through the bowl of the pipe, and so fill the little box with smoke, which will soon be seen issuing from it in all directions.

This feature of porosity is one of the most important advantages which plaster-of-Paris possesses over the silicate jackets, and varnished leather, and shellac cloth, etc.; while in the manufacture of all of these there is required a solid mould to make which a plaster-of-Paris jacket is first constructed on the patient, and thus a great deal more time and trouble are required than in the original plan of my father, Professor Sayre.

One great advantage of the latter is also that the physician is rendered independent of the instrument-maker, a point of no small importance to a man living in the country, while the other methods above mentioned require usually the services of a skilled mechanic, or else a much greater amount of time than is at the disposal of a busy practitioner.

Dr. Bruns says that his water-glass jackets weigh "for a child of eight or ten about 3½ pounds," a fact much in favor of plaster-of-Paris, as those for a girl of eighteen or nineteen weigh but 2 to 2½ pounds, while for a child of eight I have made them as light as 1½ pounds.

As to the objection that plaster-of-Paris jackets "give rise to pressure sores, as well as (in pauper practice) to the appearance of numerous lice," I would say, that skill in the accurate adjustment of the jacket and attention to complaints of pain, will prevent the former, and as for the lice they will grow under a "water-glass" as well as under plaster-of-Paris if either be applied to a filthy body.

The point, however, which has caused me to write this letter is the fact that Dr. Bruns evidently does not understand the difference in treatment of Pott's disease and lateral curvature of the spine, as he says: "A serious drawback of Sayre's jacket is, it cannot be taken off at will." Now, if it is a case of Pott's disease in the acute stage, the quieter the bones can be kept the better, and the jacket should no more be removed daily than should the splints from a broken leg.

In the later stages of the disease it is well to split the jacket down the front, and fasten it together with hooks and lacings, so that it occasionally may be removed for bathing; while in lateral curvature the jacket is *always* cut open and *removed every night*, and while the patient is practising gymnastic exercises, which are as essential for the cure of this disease as rest is for the other. My father has taught me these principles for years.

Yours respectfully,

REGINALD H. SAYRE, M.D.

225 FIFTH AVENUE, N. Y., Sept. 14, 1887.

NEWS ITEMS.

SUCCESSFUL LAPAROTOMY FOR GUNSHOT WOUND OF THE ABDOMEN.—DR. C. E. CASE, of Tocoma, W. T., writes us that he has recently successfully performed laparotomy with antiseptic precautions in the case of a boy who was shot by a 32-calibre pistol, the ball entering two inches above and to the right of the umbilicus and passing out of the body three inches to the right of the spine. Considerable blood was found in the abdominal cavity. The boy is now convalescing.

PROGRAMME OF THE INTERNATIONAL CONGRESS OF HYGIENE AT VIENNA.—This Congress will meet at Vienna, September 26, 1887, under the presidency of Archduke Rudolph and Professor Ludwig.

The addresses will be as follows:

Professor Brouardel on Typhoid Fever and its Propagation.

Professor Pettenkofer on the Relative Position of the Study of Hygiene in Medical Colleges and the Higher Schools of Technology.

Professor Corradi on Longevity from the Standpoints of History, Anthropology, and Hygiene. And

Professor Charles Théodore on the Most Important Changes in the Population of Europe in the Past Thousand Years.

Discussions will also be held on these and kindred topics.

The hospitality of Vienna and its suburbs has been extended to the Congress; and an excursion down the Danube to Buda-Pesth will be made.

The Government coöperates most actively in the work of the profession for the success of the Congress.

DEATH BY DECAPITATION. — REGNARD and LOYE presented recently to the French Academy of Sciences the following results of their examination of the body of a decapitated criminal:

Two seconds after decapitation no sign of consciousness could be detected.

Corneal reflexes persisted six seconds after decapitation. Ventricular contractions were observed for twenty-five minutes; auricular contractions for one hour. Aside from ocular reflexes, contraction of the jaws, and spurting from the carotids, the impression was as if a cadaver had been decapitated.

This calm death, without agony, was evidently caused by inhibition, resembling that caused in animals by certain irritants to the nervous system.

The entrance of air beneath the arachnoid was a purely physical phenomenon caused by the escape of blood from the cranium.—*L'Union Médicale*, July 12, 1887.

THE CHILDREN OF THE ENGLISH POOR.—The attention of the House of Commons was recently called to the starved condition of poor children in English schools. The *British Medical Journal* estimates that eighty or ninety per cent. of these children are physically unfit for either study or exercise from starvation.

The House Secretary has announced his intention of issuing a circular prescribing that due precaution be taken to avoid excess in the legal punishment of young children. The occasion for this action was the recent flogging by a policeman of a boy, aged seven years, for theft. When brought to a surgeon he had fifty wounds from the lash, and was in a condition of severe prostration.

THE FOODS BEST DIGESTED WITH TEA AND COFFEE. —In the *Journal of Anatomy and Physiology*, DR. J. W. FRASER reports the results of his experiments on the action of tea, coffee, and cocoa, on stomach and intestinal

digestion. He summarizes his views by the following recommendations and deductions: 1. That it is better not to eat much albuminoid food-stuffs at the same time as infused beverages are taken; for it has been shown that their digestion will in most cases be retarded, though there are possibly exceptions. Absorption may be rendered more rapid, but there is a loss of nutritive substance. On the other hand, the digestion of starchy food appears to be assisted by tea and coffee; and gluten, the albuminoid of flour, has been seen to be the principle least retarded in digestion by tea, and it only comes third with cocoa, while coffee has apparently a much greater retarding action on it. From this it appears that bread is the natural accompaniment of tea and cocoa when used as the beverages at a meal. Perhaps the action of coffee is the reason why, in this country, it is usually drank alone or at breakfast—a meal which consists much of meat, and of meats (egg and salt meats) which are not much retarded in digestion by coffee. 2. That eggs are the best form of animal food to be taken along with infused beverages, and that apparently they are best lightly boiled if tea, hard boiled if coffee or cocoa, is the beverage. 3. That the casein of the milk and cream taken with the beverages is, probably, absorbed in a large degree from the stomach, and that the butter used with bread undergoes digestion more slowly in the presence of tea, but more quickly in the presence of coffee or cocoa; that is, if the fats of butter are influenced in a way similar to oleine. 4. That the use of coffee or cocoa as excipients for cod-liver oil, etc., appears not only to depend on their pronounced tastes, but also on their action in assisting the digestion of fats. —*Science*, July 15, 1887.

DISINFECTANT CANDLES.—Perhaps the most elegant method of disinfection hitherto suggested is that which we owe to the ingenuity of Mr. George Browne, F.C.S., who has taken advantage of candle combustion to free, in a vaporous state iodine and phenol, by the decomposition of iodo-salicylic acid. Iodo-salicylic acid is quite as effective in its destructive properties on the lower forms of life as iodoform, while it has not its disagreeable odor. We have tried them in water closets with admirable effect, the air of a rather confined closet being kept quite free from all unpleasant odors by burning one of these candles at intervals during the day in it. Also, it removes the smell of tobacco smoke from a room which has been impregnated with it. The presence of iodine in the air can be demonstrated by a little starch paste, a pretty experiment being to hold a globe rinsed with a weak solution of starch paste over the flame of the candle, when fluorescent particles of the iodide of starch will be deposited.—*Provincial Medical Journal*, August 1, 1887.

THE MODERN PHYSICIAN.—ROBERT LOUIS STEVENSON, in the preface to *Underwoods*, pays the following tribute to the medical profession:

"There are men and classes of men that stand above the common herd; the soldier, the sailor, and the shepherd not unfrequently, the artist rarely; rarer still, the clergyman; the physician almost as a rule. He is the flower (such as it is) of our civilization; and when that stage of men is done with, and only remembered to be marvelled at in history, he will be thought to have shared as little as any in the defects of the period, and most notably exhibited the virtues of the race. Generosity he had, such as is possible to those who practise an art, never to those who drive a trade; discretion, tested by a hundred secrets; tact, tried in a thousand embarrassments; and, what is more important, Heraclean cheerfulness and courage. So it is that he brings air and cheer into the sick-room, and often enough, though not so often as he wishes, brings healing."

SOLUBILITY OF PILL COATINGS.—The relative solubility of pill coatings has been experimented on by Dr. Thompson, and by him reported in the *Chemist and Druggist* to be as follows, the most soluble being first named: Gelatine, sugar, talc venet., balsam of tolu.

OFFICIAL LIST OF CHANGES IN THE STATIONS AND DUTIES OF OFFICERS SERVING IN THE MEDICAL DEPARTMENT U. S. ARMY, FROM SEPTEMBER 13 TO SEPTEMBER 19, 1887.

CABELL, JULIAN M, *First Lieutenant and Assistant Surgeon.*—Relieved from duty in connection with the annual Department Rifle Competition at Bellevue Rifle Range, Nebraska; ordered for duty as Medical Officer at the "Rifle Camp for Team of Distinguished Marksmen," Bellevue Rifle Range.—*S. O. 89, Department of the Platte*, September 10, 1887.

OFFICIAL LIST OF CHANGES IN THE MEDICAL CORPS OF THE U. S. NAVY FOR THE WEEK ENDING SEPTEMBER 17, 1887.

ASHBRIDGE, RICHARD, *Passed Assistant Surgeon.*—Detached from the "Constellation," and ordered to the Naval Academy, Annapolis, Maryland.

AYERS, JOSEPH G., *Surgeon.*—Detached from Torpedo Station, and wait orders.

WISE, JOHN C., *Surgeon.*—Ordered to relieve Surgeon Ayers, at Torpedo Station.

COWEN, SAMUEL T., *Medical Director.*—Detached from the Hospital, Chelsea, Massachusetts, and placed on Retired List, September 17th.

BRADLEY, GEORGE P., *Surgeon.*—Leave of absence extended six months, with permission to remain abroad.

OFFICIAL LIST OF CHANGES OF STATIONS AND DUTIES OF MEDICAL OFFICERS OF THE U. S. MARINE HOSPITAL SERVICE, FOR THE WEEK ENDING SEPTEMBER 17, 1887.

HUTTON, W. H. H., *Surgeon.*—Granted leave of absence for thirty days, September 15, 1887.

PURVIANCE, GEORGE, *Surgeon.*—Granted leave of absence for thirty days, September 13, 1887.

ARMSTRONG, S. T., *Passed Assistant Surgeon.*—Granted leave of absence for thirty days, September 13, 1887.

GLENNAN, A. H., *Passed Assistant Surgeon.*—To proceed to Charleston, South Carolina, for temporary duty, September 15, 1887.

WHITE, J. H., *Assistant Surgeon.*—Granted leave of absence for twenty seven days, September 13, 1887.

NORMAN, SEATON, *Assistant Surgeon.*—Granted leave of absence for twenty days, September 16, 1887.

HEATH, F. C., *Assistant Surgeon.*—To proceed to Mobile, Alabama, for temporary duty, September 15, 1887.

THE MEDICAL NEWS will be pleased to receive early intelligence of local events of general medical interest, or of matters which it is desirable to bring to the notice of the profession.

Local papers containing reports or news items should be marked.

Letters, whether written for publication or private information, must be authenticated by the names and addresses of their writers—of course not necessarily for publication.

All communications relating to the editorial department of the NEWS should be addressed to No. 1004 Walnut Street, Philadelphia.